



## **Audit Committee**

**Friday, March 16, 2018 at 8:00 a.m.**

5th Floor Board Room, Water Board Building  
735 Randolph Street, Detroit, Michigan 48226  
*GLWater.org*

### **AGENDA**

1. CALL TO ORDER
2. ROLL CALL
3. APPROVAL OF AGENDA
4. APPROVAL OF MINUTES
  - A. February 23, 2018 (Page 0)
5. PUBLIC PARTICIPATION
6. OLD BUSINESS
  - A. Annual Update & Financing Strategy with PFM (Part 2 of 2) (Page 4)
  - B. Update: FY 2019 – FY 2020 Biennial Budget and FY 2019 – 2023 (Page 31)  
Financial Plan
  - C. FY 2017 Audit Extension Request (Page 47)
7. NEW BUSINESS
  - A. Water Residential Assistance Program Update and Proposed (Page 51)  
Program Assistance Allocation Changes
  - B. Request for Public Hearing: Drinking Water Revolving Fund (Page 63)  
(DWRF) Project Plan Submittals for the Lake Huron Water Treatment Plant  
Sludge System Improvements Project and the Waterworks Park to Northeast  
Transmission Main Project
  - C. GLWA Sewer Charge Stability Adjustment (Page 71)
8. REPORTS
  - A. Quarterly Investment Report through December 31, 2017 (Page 76)  
(Unaudited)
  - B. Monthly Revenue & Collections Report for January 2018 (Page 102)
  - C. Treasury Report: Cash Transfers through February 1, 2018 (Page 127)
  - D. Construction Work-in-Progress Report through (see Addendum #1)  
September 30, 2017
  - E. Procurement Group Process Improvements - Implementation of (Page 130)  
Bonfire
  - F. CFO Update (verbal)
9. LOOK AHEAD

Next Audit Committee Meeting – April 20, 2018 at 8 am (Regular Meeting)
10. INFORMATION
  - A. City of Detroit Water and Sewerage Department Audited Financial (Page 136)  
Report FYE June 30, 2017

- B. City of Detroit Water and Sewerage Department Monthly Financial (Page 173)  
Report for January 2018
- C. City of Detroit Water and Sewerage Department Proposed (Page 198)  
FY 2019 Budget as of February 7, 2018
- D. City of Detroit Water and Sewerage Department Preliminary (Page 220)  
FY 2019-2013 Capital Improvement Plan as of February 7, 2018

11. OTHER MATTERS

12. ADJOURNMENT

# **Great Lakes Water Authority**

*735 Randolph Street  
Detroit, Michigan 48226  
[glwater.legistar.com](http://glwater.legistar.com)*



## **Meeting Minutes - Draft**

**Friday, February 23, 2018**

**8:00 AM**

**Special Meeting**

**Water Board Building 5th Floor**

### **Audit Committee**

## 1. Call To Order

Chairman Baker called the meeting to order at 8:05 a.m.

## 2. Quorum Call

**Present:** 3 - Chairman Brian Baker, Director Gary Brown, and Director Robert Daddow

**Note:** Director Daddow's attendance via teleconference call.

## 3. Approval of Agenda

**Motion By:** Gary Brown  
**Support By:** Robert Daddow  
**Action:** Approved  
The motion carried by a unanimous vote.

## 4. Approval of Minutes

### A. [2018-622](#) Approval of Minutes of February 9, 2018

**Sponsors:** Nicolette Bateson

**Indexes:** Finance

**Attachments:** [February 9 2018 Audit Committee Meeting Minutes](#)

Chairman Baker requested a Motion to approve the February 9, 2018 Audit Committee Meeting Minutes.

**Motion By:** Gary Brown  
**Support By:** Robert Daddow  
**Action:** Approved  
The motion carried by a unanimous vote.

## 5. Public Comment

Raphael Chirolla (Oakland County Water Resources Commissioner's office), on behalf of the Oakland/Macomb Interceptor District (OMID), addressed the Audit Committee regarding the 2019 Rate Methodology and Allocation for the Oakland/Macomb Interceptor District (OMID).

## 6. Old Business

### A. Discussion: Memorandum of Understanding Related to Lease Implementation Matters (verbal update)

Nicolette Bateson, Chief Financial Officer/Treasurer, gave a verbal update regarding the Memorandum of Understanding Related to Lease Implementation Matters.



B. Discussion Draft: FY 2017 Financial Report (verbal update)

**Nicolette Bateson, Chief Financial Officer/Treasurer, gave a verbal update regarding the Draft FY 2017 Financial Report.**

C. FY 2017 Audit Extension Request (verbal update)

**Nicolette Bateson, Chief Financial Officer/Treasurer, gave a verbal update regarding the FY 2017 Audit Extension Request.**

## 7. New Business

A. Discussion: Cost Pool Carryover Program (verbal update)

**Bart Foster of The Foster Group gave a verbal update regarding the Cost Pool Carryover Program.**

B. [2018-623](#) FY 2018 Budget to Actual Report thru December 31, 2017

**Sponsors:** Nicolette Bateson

**Indexes:** Finance

**Attachments:** [FY 2018 Q2 Budget Report for 2.23.2018 Final](#)

**Motion By: Gary Brown  
Support By: Brian Baker  
Action: Received and Filed  
The motion carried by a unanimous vote.**

C. [2018-625](#) Discussion: Debt Service Coverage Calculations and Lease Agreements (verbal update)

**Sponsors:** Nicolette Bateson

**Indexes:** Finance

**Attachments:** [Debt Service Coverage Calculations and Lease Agreements](#)

**Motion By: Gary Brown  
Support By: Robert Daddow  
Action: Received and Filed  
The motion carried by a unanimous vote.**

## 8. Reports

**A.**     [2018-624](#)     Planner: Construction Work-in-Progress Review Schedule

**Sponsors:** Nicolette Bateson

**Indexes:** Finance

**Attachments:** [Proposed FY 2018 Construction Work-in-Progress Review Schedule  
2.23.2018  
CWIP Dates with days](#)

**Motion By:** Gary Brown

**Support By:** Robert Daddow

**Action:** Received and Filed

The motion carried by a unanimous vote.

**9. Look Ahead**

The Next Audit Committee Meeting is scheduled for Friday, March 16, 2018 at 8:00 a.m.

**10. Information**

None

**11. Other Matters**

None

**12. Adjournment**

Chairman Baker requested a Motion to Adjourn.

**Motion By:** Gary Brown

**Support:** Robert Daddow

**Action:** Approved

The motion carried by a unanimous vote.

There being no further business, the meeting was adjourned at 10:15 a.m.



## Financial Services Audit Committee Communication

**Date:** March 16, 2018

**To:** Great Lakes Water Authority Audit Committee

**From:** Jon Wheatley, Public Finance Manager

**Re:** Annual Update & Financing Strategy with PFM (Part 2 of 2)

**Background:** This presentation is a follow-up to the presentation given by PFM Financial Advisors (PFM) at the Great Lakes Water Authority (GLWA) Audit Committee meeting on January 19, 2018. GLWA is currently evaluating opportunities to better manage the existing debt portfolio and evaluating water and sewer bond refunding opportunities during the next several months. As part of the evaluation process, PFM is analyzing GLWA's draft FY 2017 financial metrics in comparison to other similar water and sewer utilities. The analysis also uses the draft FY 2017 GLWA metrics as inputs to the Standard and Poor's and Moody's rating agency scorecards to demonstrate how GLWA's metrics align.

**Analysis:** The PFM presentation also identifies the yield differential for the 'A' and 'AA' categories and the potential interest cost savings based on a hypothetical \$100 million bond issuance and for a \$2 billion capital program<sup>i</sup>. As GLWA looks to increase its ratings, this yield differential related to the ratings increase means lower interest costs on its refunding opportunities and future capital program financings.

The draft FY 2019 and FY 2020 biennial budget and 5-year financial plan, which was presented to the Board at its meeting on January 24, 2018 and at the February 29, 2018 public hearing, reflect no potential refunding savings. Based upon potential refunding candidates this calendar year, and rates and assumptions presented in the PFM analysis, GLWA could see an average annual savings of about \$2.8 million and the water system \$2.7 million for the sewer system over the remaining term of the original bonds. For this reason, the GLWA staff will present water and sewer series ordinances for the proposed refunding bonds and related financing schedule to the Audit Committee in April 2018.

**Budget Impact:** None.

**Proposed Action:** Receive and file report.

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<sup>i</sup> Note: GLWA's proposed FY 2019 through FY 2023 capital improvement program totals \$1.3 billion with a financial plan that contemplates up to \$780 million of new bond financing.



# Rating Agency Criteria and Peer Comparison for Financial Metrics

**Presented by:**  
**Dan Hartman, Managing Director**

**March 16, 2018**

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PFM Financial Advisors LLC

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4350 N. Fairfax Drive  
Suite 580  
Arlington, VA 22203

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703.741.0175  
[pfm.com](http://pfm.com)



## Key Financial Metrics for GLWA

The maintenance of key financial metrics is critically important to GLWA's ongoing positioning for rating upgrades and its objective of lowering GLWA's fixed costs for both the Water and Sewer enterprises.

- GLWA senior lien water and sewer ratings of A3/A-/A remain among the lower quartile of utility ratings nationally
- GLWA continues to push forward with efforts to improve its bond ratings up to AA category ratings for both the water and sewer sectors, recognizing that debt service (for planned new money and refinancing bonds) accounts for almost 50% of the annual budget
- With the improvement in senior lien bond ratings to the AA category for water and sewer, significant reductions in fixed cost could be achieved relative to the maintenance of current ratings
- GLWA has identified an initial group of peer utilities, against which it is benchmarking performance and establishing targets for key metric of debt service coverage and liquidity to improve bond ratings
- GLWA is also using rating agency medians on a broader range of variables to assess the progress for the upgrade of its senior lien bond ratings
- Ongoing benchmarking and continued progress in improving key financial metrics of GLWA are critical to the achievement of lower debt service cost and a path to higher credit quality



## Current Water and Sewer Ratings

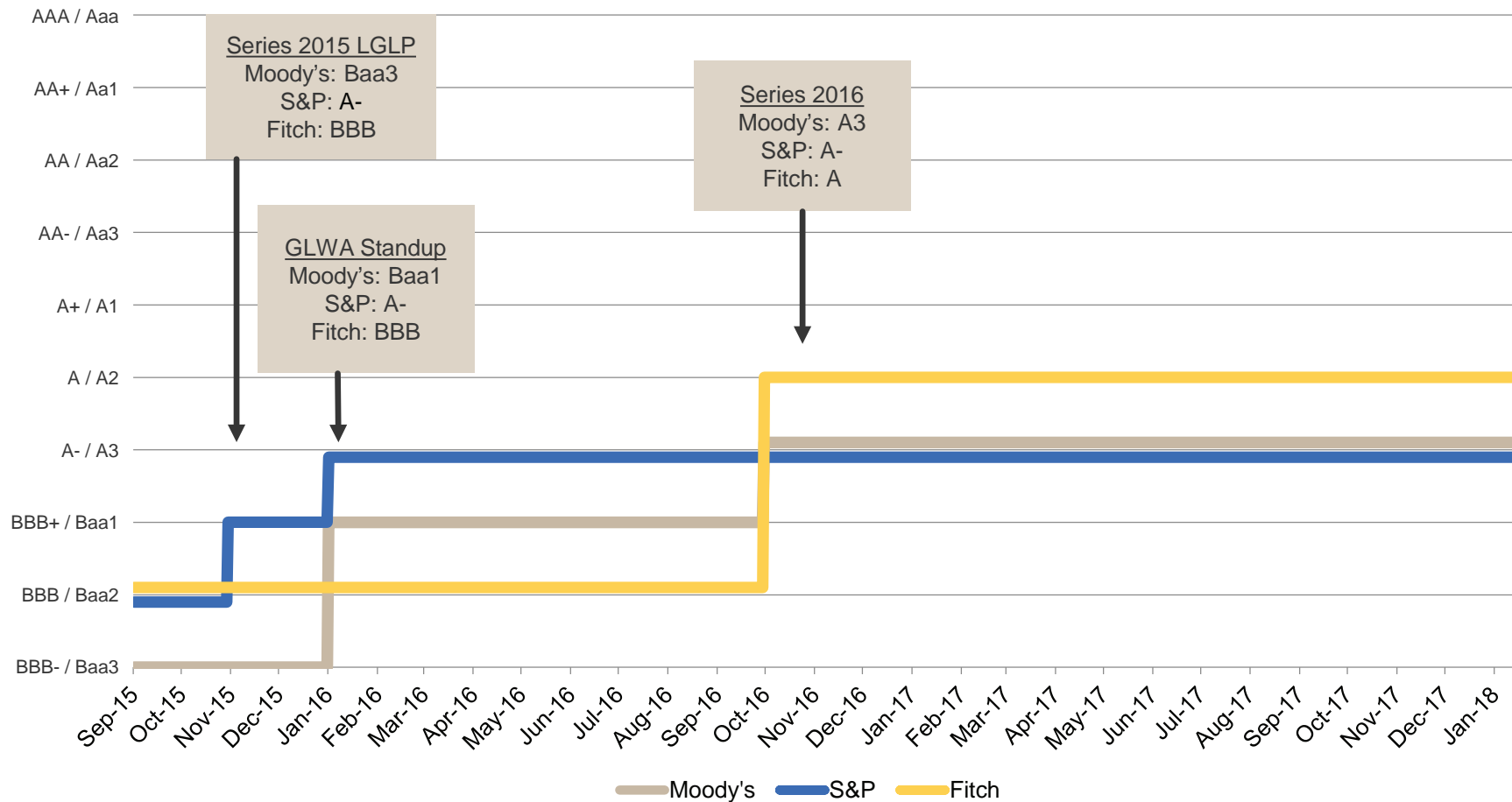
| Water       |         |          |        |
|-------------|---------|----------|--------|
|             | Moody's | S&P      | Fitch  |
| Senior Lien | A3      | A-       | A      |
| Second Lien | Baa1    | BBB+     | A-     |
| Outlook     | Stable  | Positive | Stable |

| Sewer       |         |          |        |
|-------------|---------|----------|--------|
|             | Moody's | S&P      | Fitch  |
| Senior Lien | A3      | A-       | A      |
| Second Lien | Baa1    | BBB+     | A-     |
| Outlook     | Stable  | Positive | Stable |



## History of Senior Lien Water and Sewer Ratings

Senior Lien Ratings History (GLWA Standup to Present)





## Current Rating Agency Views

| Summary of Rating Agency Views  |  |   |
|---|--|---|
| Moody's Investors Service<br>Matt Butler / Andrew Van Dyke Dobos  | Standard & Poor's<br>Scott Garrigan / Ted Chapman  | Fitch Ratings<br>Doug Scott / Major Parkhurst   |
| A3 (Sr.) / Baa1 (2nd)<br>Stable Outlook   | A- (Sr.) / BBB+ (2nd)<br>Positive Outlook  | A (Sr.) / A- (2nd)<br>Stable Outlook  |
| Strengths   |  |   |
| <ul style="list-style-type: none"> <li>— Very wide service area that includes a population of 3.8 million</li> <li>— Commitment to revenue enhancements will likely support sound debt service coverage and healthy liquidity</li> <li>— GLWA management team has implemented operating adjustments to cut costs and improve financial metrics, and is committed to continuing these efforts</li> <li>— Excess treatment capacity presents management with flexibility to repurpose facilities to achieve further operating efficiencies</li> </ul> | <ul style="list-style-type: none"> <li>— Diverse revenue stream from a large number of wholesale customers</li> <li>— Adequate-to-good historical financial performance, with projections that indicate generally improving conditions</li> <li>— Generally affordable rates given income indicators for the Detroit metropolitan statistical area</li> <li>— Management policies and procedures that we generally consider strong</li> </ul>              | <ul style="list-style-type: none"> <li>— Essential service provider in expansive service territory</li> <li>— Strong rate adjustment history in support of financial and capital needs</li> <li>— Over 75% of operating revenues coming from suburban customers with higher wealth metrics</li> <li>— All system funds and accounts are separate and distinct Detroit funds including the city's general fund</li> <li>— Changes in rate setting practices and reserve accumulation should help to insulate GLWA from high city retail delinquencies</li> </ul> |
| Challenges  |  |   |
| <ul style="list-style-type: none"> <li>— Declining water consumption trend High leverage will moderate slowly given outstanding capital improvement needs and plans to issue debt</li> <li>— High combined operating needs and fixed costs leave little margin to miss revenue targets</li> <li>— Economic and demographic weaknesses in portions of the service area</li> </ul>  | <ul style="list-style-type: none"> <li>— Significant economic stress in Detroit, which could continue to place downward pressure on utility collection rates</li> <li>— Large amount of accounts receivable and high allowances for doubtful accounts</li> <li>— Significantly less affordable rates for customers living in Detroit compared to suburban residents</li> <li>— System leverage that is high and unlikely to abate significantly</li> </ul> | <ul style="list-style-type: none"> <li>— Debt load is expected to remain elevated for the foreseeable future</li> <li>— Continued annual rate adjustments are needed to meet rising debt service obligations and sustain financial performance</li> </ul>   |





## Value of Robust Credit Ratings

- Upgrades beyond current credit ratings unlock significant value given size and scope of new money capital plan and potential refinancings
- 20-year average life for \$2 billion of capital borrowing

| Rating | Yield Differential vs. AA Rating | Individual Bond Sale (\$100 million)     |  |            | Aggregate Capital Program (\$2 billion) |  |                                    |
|--------|----------------------------------|--|--|------------|---|--|------------------------------------|
|        |                                  | Annual Cost Differential (\$100 million) | Total Cost Differential (Through Maturity) | PV at 4%   | Annual Cost (\$2 billion)               | Total Cost Differential (Through Maturity) | PV at 4% (\$100MM Issued Annually) |
| AA     | 0.00%                            | \$ -                                     | \$ -                                       | \$ -       | \$ -                                    | \$ -                                       | \$ -                               |
| AA-    | 0.05%                            | 50,000                                   | 1,000,000                                  | 677,116    | 1,000,000                               | 20,000,000                                 | 9,535,661                          |
| A+     | 0.20%                            | 200,000                                  | 4,000,000                                  | 2,708,463  | 4,000,000                               | 80,000,000                                 | 38,142,644                         |
| A      | 0.30%                            | 300,000                                  | 6,000,000                                  | 4,062,695  | 6,000,000                               | 120,000,000                                | 57,213,966                         |
| A-     | 0.50%                            | 500,000                                  | 10,000,000                                 | 6,771,158  | 10,000,000                              | 200,000,000                                | 95,356,610                         |
| BBB+   | 0.75%                            | 750,000                                  | 15,000,000                                 | 10,156,737 | 15,000,000                              | 300,000,000                                | 143,034,916                        |



# Comparable Utility Metrics

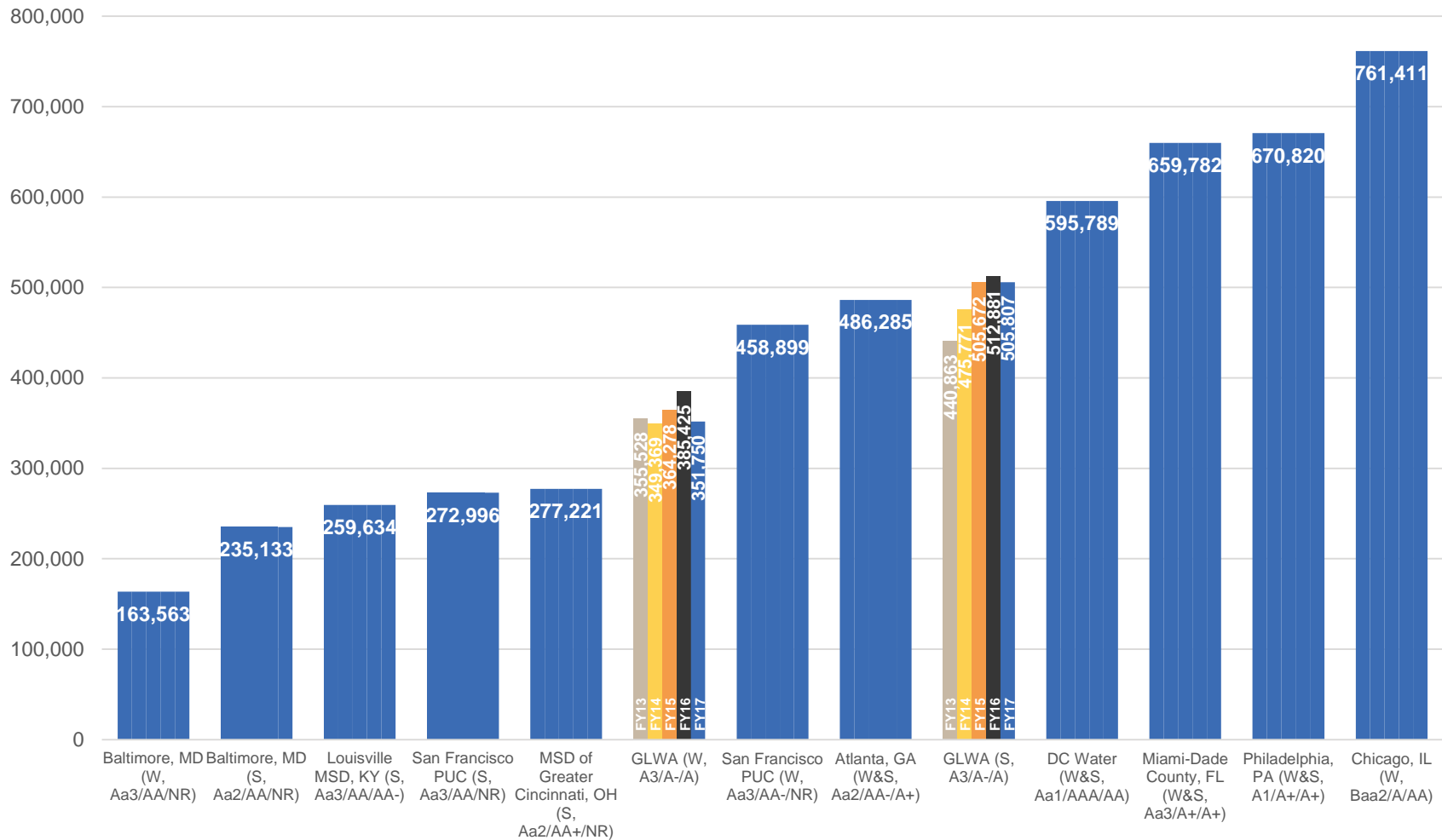


## Select Peer Group

| Selected Peer                         | Moody's Rating (Senior) | S&P Rating (Senior) | Fitch Rating (Senior) | Total Operating Revenues (\$000s) | Total O&M Expenses (\$000s) | Total Annual DS (\$000s) | Long Term Debt (\$000s) | DS as a % of Total Operating Revenues | Total Debt Service Coverage | Days Cash and Inv. (days) |
|---------------------------------------|-------------------------|---------------------|-----------------------|-----------------------------------|-----------------------------|--------------------------|-------------------------|---------------------------------------|-----------------------------|---------------------------|
| Atlanta, GA (Water & Sewer)           | Aa2                     | AA-                 | A+                    | 486,285                           | 222,664                     | 213,856                  | 2,924,317               | 44.0%                                 | 1.9x                        | 1,364                     |
| Baltimore, MD (Water)                 | Aa3                     | AA                  | -                     | 163,563                           | 118,923                     | 50,674                   | 912,410                 | 31.0%                                 | 0.9x                        | 58                        |
| Baltimore, MD (Sewer)                 | Aa2                     | AA                  | -                     | 235,133                           | 133,964                     | 51,838                   | 1,065,638               | 22.0%                                 | 2.0x                        | 329                       |
| Chicago, IL (Water)                   | Baa2                    | A                   | AA                    | 761,411                           | 310,741                     | 171,003                  | 2,655,931               | 22.5%                                 | 2.6x                        | 591                       |
| DC Water (Water & Sewer)              | Aa1                     | AAA                 | AA                    | 595,789                           | 278,128                     | 152,081                  | 2,900,329               | 25.5%                                 | 1.8x                        | 262                       |
| GLWA (Water)                          | A3                      | A-                  | A                     | 351,750                           | 101,731                     | 175,010                  | 2,647,284               | 49.8%                                 | 1.4x                        | 900                       |
| GLWA (Sewer)                          | A3                      | A-                  | A                     | 505,807                           | 150,216                     | 234,554                  | 3,341,132               | 46.4%                                 | 1.5x                        | 528                       |
| Louisville MSD, KY (Sewer)            | Aa3                     | AA                  | AA-                   | 259,634                           | 87,205                      | 137,857                  | 2,093,573               | 53.1%                                 | 1.4x                        | 220                       |
| Miami-Dade County, FL (Water & Sewer) | Aa3                     | A+                  | A+                    | 659,782                           | 382,123                     | 122,860                  | 2,112,897               | 18.6%                                 | 2.6x                        | 98                        |
| MSD of Greater Cincinnati, OH (Sewer) | Aa2                     | AA+                 | -                     | 277,221                           | 118,875                     | 100,588                  | 905,018                 | 36.3%                                 | 1.7x                        | 1,031                     |
| Philadelphia, PA (Water & Sewer)      | A1                      | A+                  | A+                    | 670,820                           | 364,197                     | 219,300                  | 1,967,114               | 32.7%                                 | 1.4x                        | 79                        |
| San Francisco PUC (Water)             | Aa3                     | AA-                 | -                     | 458,899                           | 239,389                     | 207,812                  | 4,373,170               | 45.3%                                 | 1.3x                        | 487                       |
| San Francisco PUC (Sewer)             | Aa3                     | AA                  | -                     | 272,996                           | 157,243                     | 49,956                   | 986,111                 | 18.3%                                 | 2.7x                        | 454                       |

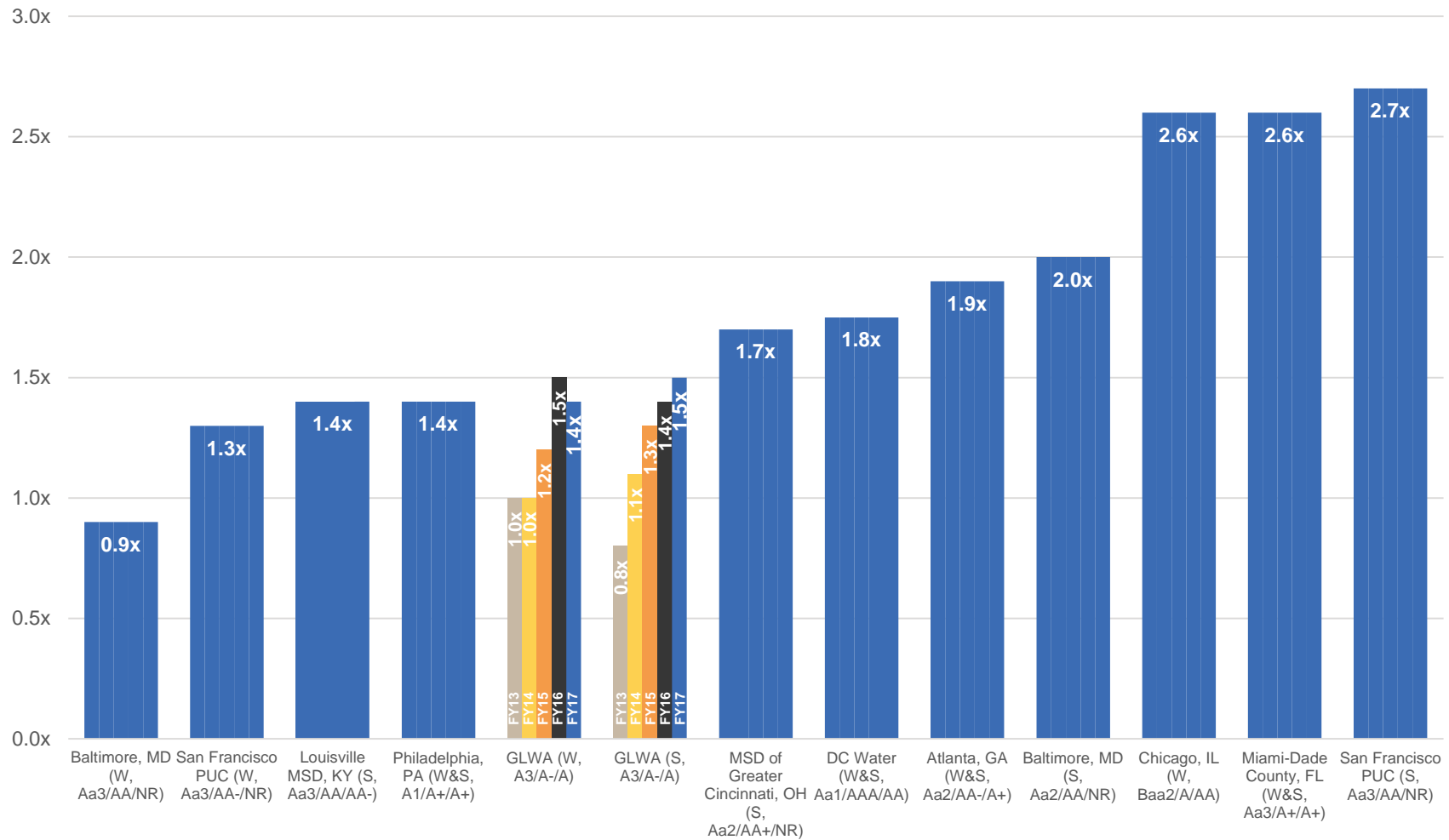


## Peer Comparison of Total Operating Revenues



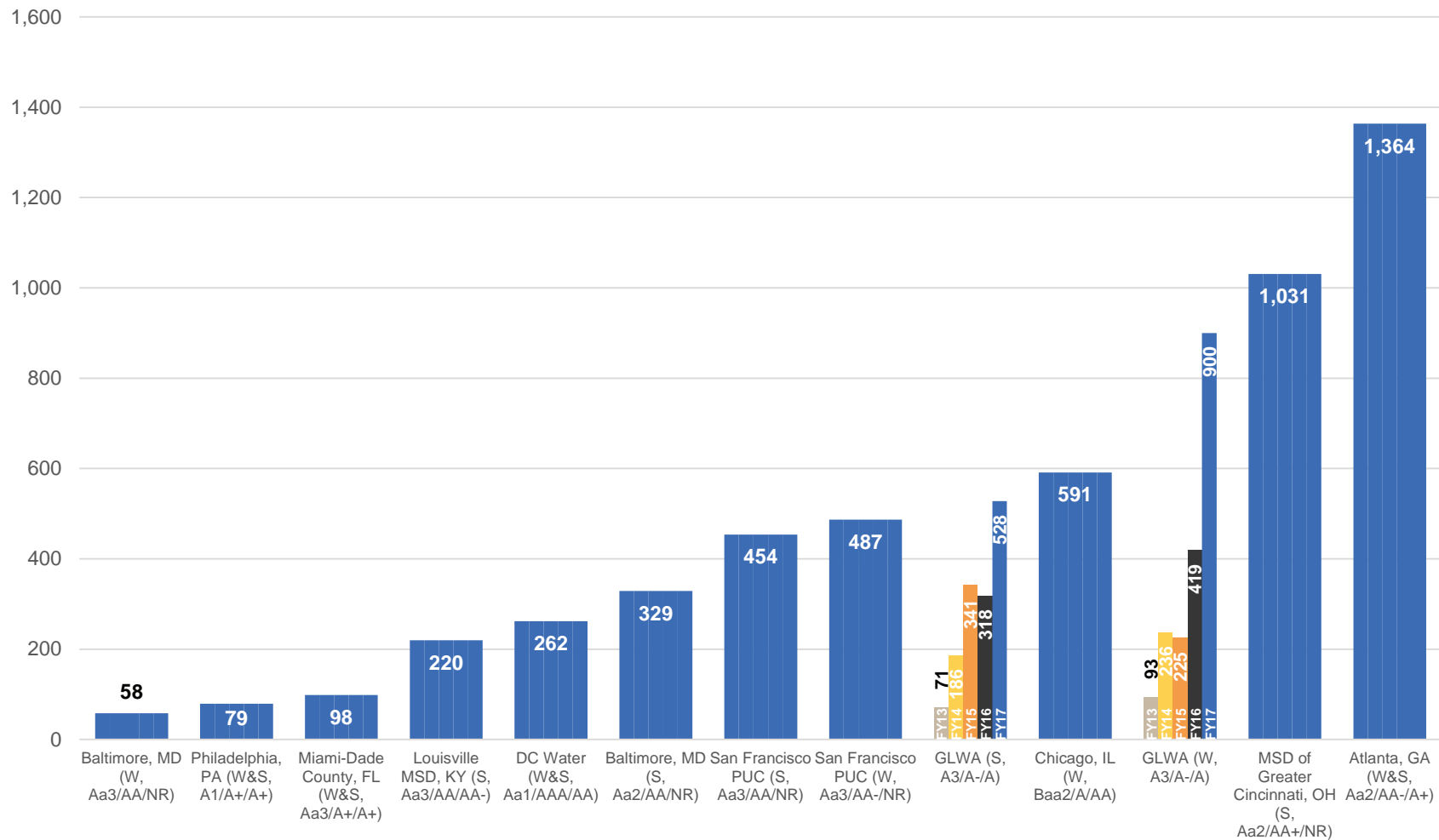


## Peer Comparison of Total Debt Service Coverage





## Peer Comparison of Unrestricted Days Cash and Investments





## Summary of GLWA Liquidity

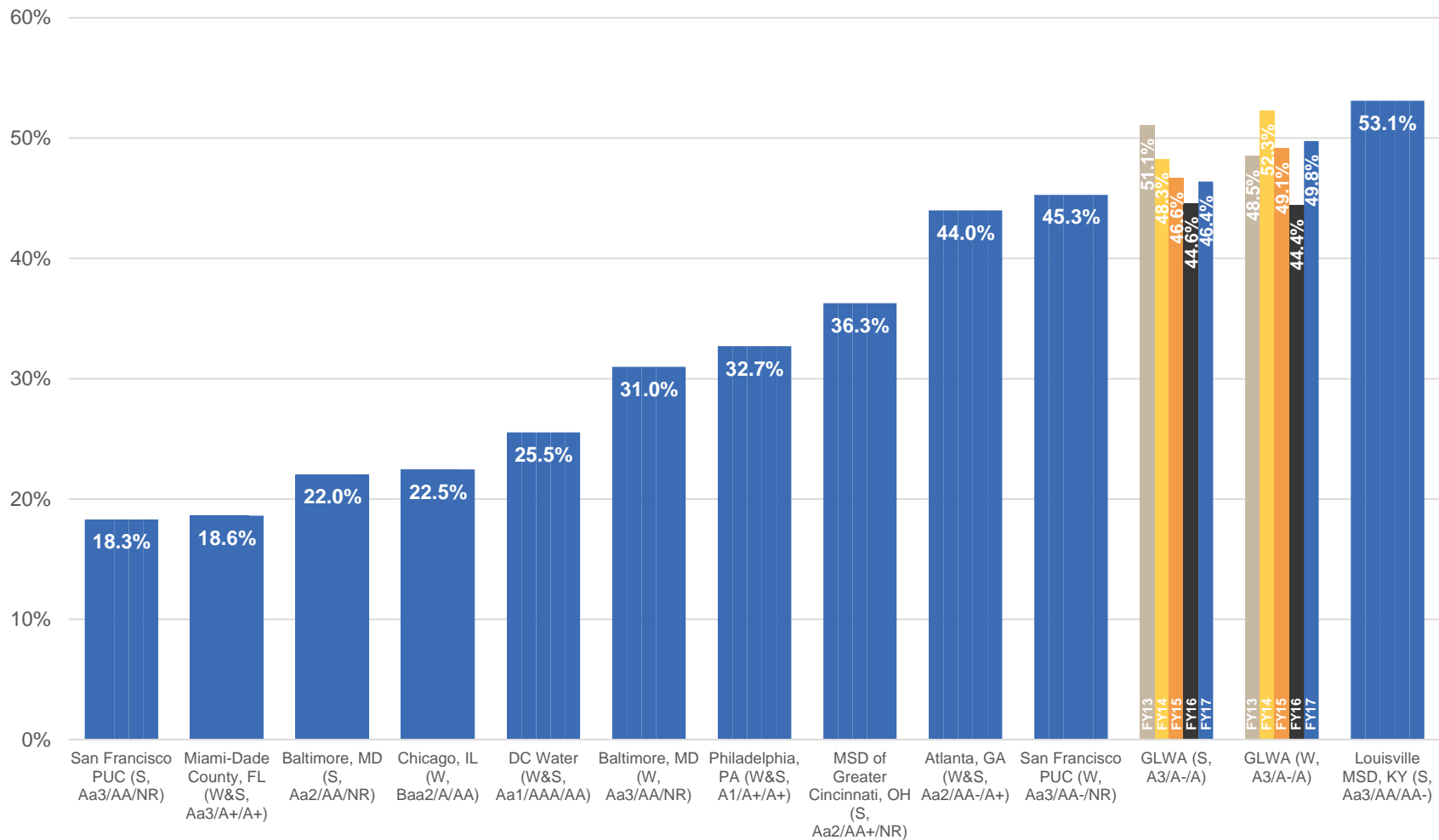
| Water System                                    |                        |                                |
|---|------------------------|--------------------------------|
| Source  | FY 2017 Amount         | Days Cash & Investments (days) |
| Operation & Maintenance Fund                    | \$43.6 million         | 156                            |
| Extraordinary Repair & Replacement Reserve Fund | \$23.0 million         | 82                             |
| Improvement & Extension Account - Regional      | \$184.3 million        | 661                            |
| <b>Total</b>                                    | <b>\$250.9 million</b> | <b>900</b>                     |

| Sewer System                                    |                        |                                |
|---|------------------------|--------------------------------|
| Source  | FY 2017 Amount         | Days Cash & Investments (days) |
| Operation & Maintenance Fund                    | \$65.7 million         | 160                            |
| Extraordinary Repair & Replacement Reserve Fund | \$35.1 million         | 86                             |
| Improvement & Extension Account - Regional      | \$116.1 million        | 282                            |
| <b>Total</b>                                    | <b>\$217.4 million</b> | <b>528</b>                     |

Source: Draft FY2017 financial statements (unaudited).



## Peer Comparison of Debt Service as a % of Operating Revenues







## GLWA Relative to Fitch Rating Category Medians

|   | GLWA<br>(Water)     | GLWA<br>(Sewer)     | Fitch AAA<br>Median | Fitch<br>AA Median | Fitch A<br>Median |
|---|---------------------|---------------------|---------------------|--------------------|-------------------|
| Service Area Population   | 3.8 million         | 2.8 million         | 377,165             | 156,949            | 90,400            |
| Median Household Income   | 56,142 <sup>1</sup> | 56,142 <sup>1</sup> | 65,943              | 51,818             | 50,418            |
| Total Water Customers   | Retail metric       | Retail metric       | 69,999              | 41,633             | 33,690            |
| Total Sewer Customers   | Retail metric       | Retail metric       | 99,676              | 35,233             | 33,125            |
| Average Annual CIP per Customer                                   | Retail metric       | Retail metric       | \$1,078             | \$2,000            | \$2,331           |
| % CIP Debt Financed   | 80% <sup>2</sup>    | 49% <sup>2</sup>    | 26%                 | 37%                | 47%               |
| 10 Year Principal Payout  | 32%                 | 38%                 | 55%                 | 45%                | 39%               |
| 20 Year Principal Payout  | 78%                 | 88%                 | 95%                 | 90%                | 75%               |
| Combined Water/Sewer Average Monthly Residential Bill             | Retail metric       | Retail metric       | \$33                | \$41               | \$45              |
| Combined Water/Sewer Average Monthly Residential Bill as % of MHI | Retail metric       | Retail metric       | 1.3%                | 1.7%               | 2.2%              |
| All-in Annual Debt Service Coverage                               | 1.5x                | 1.4x                | 2.8x                | 2.1x               | 1.7x              |
| Operating Margin  | 30%                 | 33%                 | 39%                 | 43%                | 46%               |
| Days Cash on Hand   | 900                 | 528                 | 692                 | 572                | 311               |
| Free Cash as % of Depreciation                                    | 52%                 | 65%                 | 122%                | 105%               | 59%               |

Source: Fitch Ratings, "2018 Water & Sewer Medians," December 6, 2017. GLWA data from GLWA draft financial statements and PFM records. GLWA data unaudited, as of FY17 unless otherwise noted.

Notes:

1. US Census Bureau as of 2016. MHI represents Detroit-Windsor-Dearborn, MI MSA.
2. % CIP Debt Financed calculated based on Feasibility Consultant report prepared by The Foster Group as of October 14, 2016 and included in Series 2016 Official Statements. May differ from current GLWA projections.



# Moody's and S&P Rating Scorecards



## Moody's Water & Sewer Utility Scorecard (Water System)

| Scoring on Moody's Municipal Utility Methodology |  |        |  |  |   |  |   |                              |                   |               |
|--|--|--------|--|--|---|--|---|------------------------------|-------------------|---------------|
| Factor   | Description  | Weight | Aaa<br>0.50-1.49   | Aa<br>1.50-2.49  | A<br>2.50-3.49  | Baa<br>3.50-4.49   | Ba<br>4.50-5.49   | GLWA<br>Input                | Category<br>Score | GLWA<br>Score |
| System<br>Characteristics<br>(30%)               | Asset Condition - Remaining Useful Life (Net Fixed Assets / Annual Depreciation) | 10%    | > 75 Years   | 75 years ≥ n > 25 years  | 25 years ≥ n > 12 years   | 12 years ≥ n > 9 years   | 9 years ≥ n > 6 years   | 14 years                     | 3                 | 0.300         |
|  | System Size: (O&M in 000s)   | 7.5%   | > \$65 million   | \$65 M ≥ n > \$30 M  | \$30 M ≥ n > \$10 M   | \$10 M ≥ n > \$3 M   | \$3 M ≥ n > \$1 M   | \$101.7 million              | 1                 | 0.075         |
|  | Service Area Wealth: MFI   | 12.5%  | > 150% of US median  | 150% to 90% of US Median   | 90% to 75% of US Median   | 75% to 50% of US Median  | 50% to 40% of US Median   | 95%                          | 2                 | 0.250         |
| Financial<br>Strength and<br>Liquidity<br>(40%)  | Annual Debt Service Coverage   | 15%    | > 2.00x  | 2.00x ≥ n > 1.70x  | 1.70x ≥ n > 1.25x   | 1.25x ≥ n > 1.00x  | 1.00x ≥ n > 0.70x   | 1.4x                         | 3                 | 0.450         |
|  | Days Cash on Hand  | 15%    | > 250 days   | 250 days ≥ n > 150 days  | 150 days ≥ n > 35 days  | 35 days ≥ n > 15 days  | 15 days ≥ n > 7 days  | 900 days                     | 1                 | 0.150         |
|  | Debt to Operating Revenues   | 10%    | Less than 2.00x  | 2.00x < n ≤ 4.00x  | 4.00X < n ≤ 7.00X   | 7.00X < n ≤ 8.00X  | 8.00X < n ≤ 9.00X   | 7.5x                         | 4                 | 0.400         |
| Management<br>of System<br>(20%)                 | Rate Management  | 10%    | Excellent rate setting; no material political, practical, or regulatory limit to rate increases  | Strong rate setting; little material political, practical, or regulatory limit to rate increases                     | Average rate setting; some material political, practical, or regulatory limit to rate increases               | Adequate rate setting; political, practical, or regulatory impediments place material limits to rate increases   | Below average rate setting; political, practical, or regulatory impediments place material limits to rate increases | Average rate setting         | 3                 | 0.300         |
|  | Regulatory Compliance and Capital Planning                                       | 10%    | Fully compliant OR proactively addressing compliance issues; Maintains sophisticated and manageable Capital Improvement Plan that addresses more than a 10-year period | Actively addressing minor compliance issues; Maintains comprehensive and manageable 10-year Capital Improvement Plan | Moderate violations with adopted plan to address issues; Maintains manageable 5-year Capital Improvement Plan | Significant compliance violations with limited solutions adopted; Maintains single year Capital Improvement Plan | Not fully addressing compliance issues; Limited or weak capital planning  | Addressing compliance Issues | 3                 | 0.300         |
| Legal<br>Provisions<br>(10%)                     | Rate Covenant  | 5%     | >1.30x   | 1.30x ≥ n > 1.20x  | 1.20x ≥ n > 1.10x   | 1.10x ≥ n > 1.00x  | ≤ 1.00x   | 1.20x                        | 3                 | 0.150         |
|  | Debt Service Reserve Requirement   | 5%     | DSRF funded at MADS  | DSRF funded at lesser of standard 3 prong test   | DSRF funded at less than 3 prong test   | No explicit DSRF   | No explicit DSRF  | Lesser of 3 test             | 2                 | 0.100         |
| (Aa3 = 2.17 to 2.50; A1 = 2.50 to 2.83)          |  |        |  |  |   |  |   |                              |                   | 2.475         |

Source: Moody's Municipal Utility Debt Methodology, December 2014. Data from Series 2016 Moody's Report and Moody's Financial Ratio Analysis database as of February 1, 2018, updated where available with GLWA FY17 draft results (unaudited).



## Moody's Water & Sewer Utility Scorecard (Sewer System)

| Scoring on Moody's Municipal Utility Methodology |  |        |  |  |   |  |   |                              |                   |               |
|--|--|--------|--|--|---|--|---|------------------------------|-------------------|---------------|
| Factor   | Description  | Weight | Aaa<br>0.50-1.49   | Aa<br>1.50-2.49  | A<br>2.50-3.49  | Baa<br>3.50-4.49   | Ba<br>4.50-5.49   | GLWA<br>Input                | Category<br>Score | GLWA<br>Score |
| System<br>Characteristics<br>(30%)               | Asset Condition - Remaining Useful Life (Net Fixed Assets / Annual Depreciation) | 10%    | > 75 Years   | 75 years ≥ n > 25 years  | 25 years ≥ n > 12 years   | 12 years ≥ n > 9 years   | 9 years ≥ n > 6 years   | 15 years                     | 3                 | 0.300         |
|  | System Size: (O&M in 000s)   | 7.5%   | > \$65 million   | \$65 M ≥ n > \$30 M  | \$30 M ≥ n > \$10 M   | \$10 M ≥ n > \$3 M   | \$3 M ≥ n > \$1 M   | \$150.2 million              | 1                 | 0.075         |
|  | Service Area Wealth: MFI   | 12.5%  | > 150% of US median  | 150% to 90% of US Median   | 90% to 75% of US Median   | 75% to 50% of US Median  | 50% to 40% of US Median   | 95%                          | 2                 | 0.250         |
| Financial<br>Strength and<br>Liquidity<br>(40%)  | Annual Debt Service Coverage   | 15%    | > 2.00x  | 2.00x ≥ n > 1.70x  | 1.70x ≥ n > 1.25x   | 1.25x ≥ n > 1.00x  | 1.00x ≥ n > 0.70x   | 1.5x                         | 3                 | 0.450         |
|  | Days Cash on Hand  | 15%    | > 250 days   | 250 days ≥ n > 150 days  | 150 days ≥ n > 35 days  | 35 days ≥ n > 15 days  | 15 days ≥ n > 7 days  | 528 days                     | 1                 | 0.150         |
|  | Debt to Operating Revenues   | 10%    | Less than 2.00x  | 2.00x < n ≤ 4.00x  | 4.00X < n ≤ 7.00X   | 7.00X < n ≤ 8.00X  | 8.00X < n ≤ 9.00X   | 6.6x                         | 3                 | 0.300         |
| Management<br>of System<br>(20%)                 | Rate Management  | 10%    | Excellent rate setting; no material political, practical, or regulatory limit to rate increases  | Strong rate setting; little material political, practical, or regulatory limit to rate increases                     | Average rate setting; some material political, practical, or regulatory limit to rate increases               | Adequate rate setting; political, practical, or regulatory impediments place material limits to rate increases   | Below average rate setting; political, practical, or regulatory impediments place material limits to rate increases | Average rate setting         | 3                 | 0.300         |
|  | Regulatory Compliance and Capital Planning                                       | 10%    | Fully compliant OR proactively addressing compliance issues; Maintains sophisticated and manageable Capital Improvement Plan that addresses more than a 10-year period | Actively addressing minor compliance issues; Maintains comprehensive and manageable 10-year Capital Improvement Plan | Moderate violations with adopted plan to address issues; Maintains manageable 5-year Capital Improvement Plan | Significant compliance violations with limited solutions adopted; Maintains single year Capital Improvement Plan | Not fully addressing compliance issues; Limited or weak capital planning  | Addressing compliance Issues | 3                 | 0.300         |
| Legal<br>Provisions<br>(10%)                     | Rate Covenant  | 5%     | >1.30x   | 1.30x ≥ n > 1.20x  | 1.20x ≥ n > 1.10x   | 1.10x ≥ n > 1.00x  | ≤ 1.00x   | 1.20x                        | 3                 | 0.150         |
|  | Debt Service Reserve Requirement   | 5%     | DSRF funded at MADS  | DSRF funded at lesser of standard 3 prong test   | DSRF funded at less than 3 prong test   | No explicit DSRF   | No explicit DSRF  | Lesser of 3 test             | 2                 | 0.100         |
| (Aa3 = 2.17 to 2.50; A1 = 2.50 to 2.83)          |  |        |  |  |   |  |   |                              |                   | 2.375         |

Source: Moody's Municipal Utility Debt Methodology, December 2014. Data from Series 2016 Moody's Report and Moody's Financial Ratio Analysis database as of February 1, 2018, updated where available with GLWA FY17 draft results (unaudited)..



## S&P Retail Water & Sewer Utility Ratings Framework

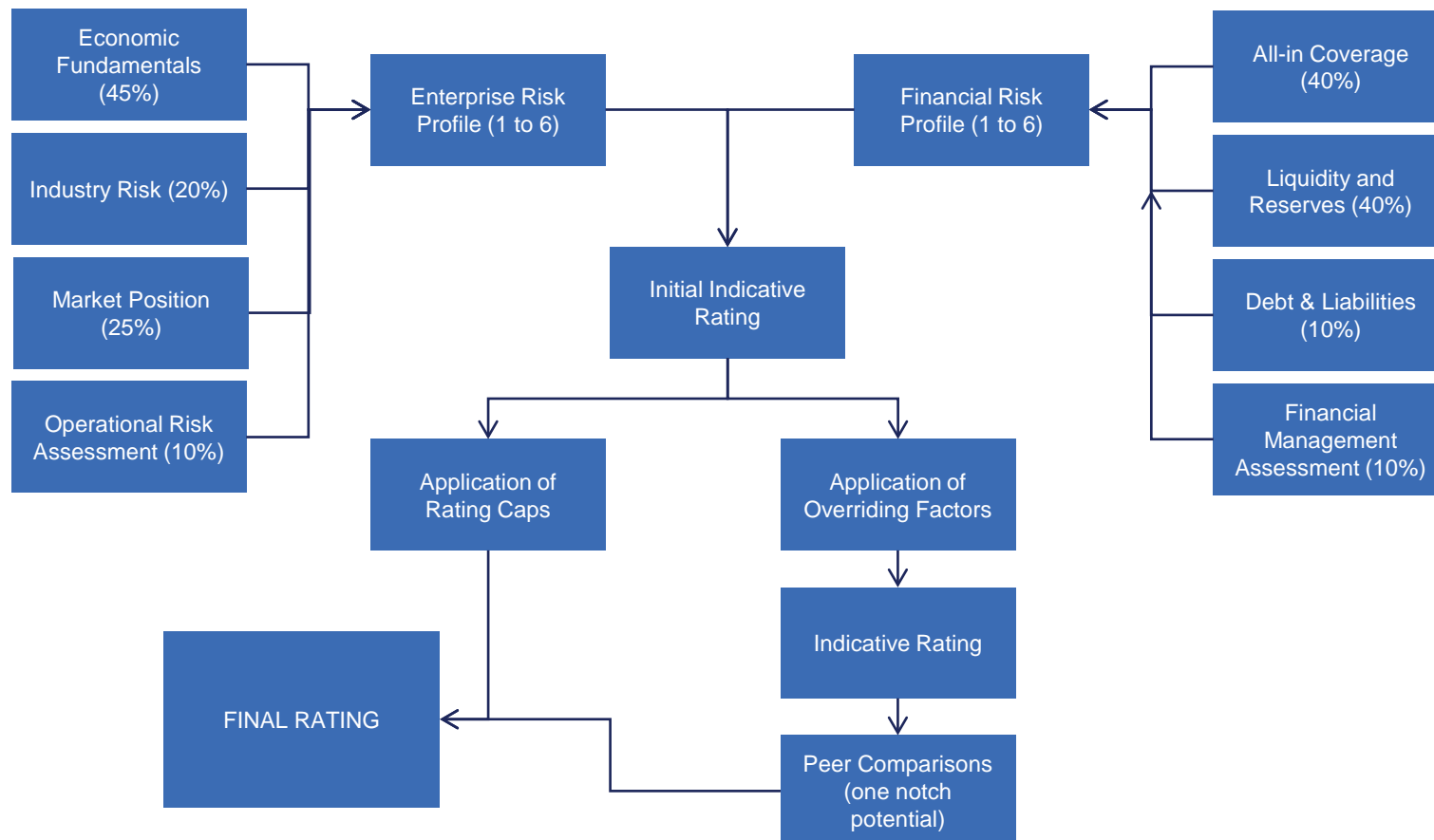
- S&P uses a hybrid approach to the rating process for GLWA, whereby retail metrics are considered but within the context of the Wholesale Utility Criteria
- Rating caps and overriding factors are applied after initial score calculated and can result in a substantially different final rating from initial indicative rating
- The weighted average of the two individual factors are rounded to the nearest whole number and the interaction between the Enterprise Risk Profile and the Financial Risk Profile determines the initial indicative rating for the Utility issuer (see table below)

|                         |                        | Financial Risk Profile |                  |             |               |                 |                        |
|-------------------------|------------------------|------------------------|------------------|-------------|---------------|-----------------|------------------------|
|                         |                        | Extremely Strong<br>1  | Very Strong<br>2 | Strong<br>3 | Adequate<br>4 | Vulnerable<br>5 | Highly Vulnerable<br>6 |
| Enterprise Risk Profile | Extremely Strong<br>1  | AAA                    | AA+              | AA-         | A             | BBB+ / BBB      | BB+ / BB               |
|                         | Very Strong<br>2       | AA+                    | AA / AA-         | A+          | A-            | BBB / BBB-      | BB / BB-               |
|                         | Strong<br>3            | AA-                    | A+               | A           | BBB+ / BBB    | BBB- / BB+      | BB-                    |
|                         | Adequate<br>4          | A                      | A / A-           | A- / BBB+   | BBB / BBB-    | BB              | B+                     |
|                         | Vulnerable<br>5        | BBB+                   | BBB / BBB-       | BBB- / BB+  | BB            | BB-             | B                      |
|                         | Highly Vulnerable<br>6 | BBB-                   | BB               | BB-         | B+            | B               | B-                     |

Source: S&P U.S. Public Finance Waterworks; Sanitary Sewer, And Drainage Utility Systems: Methodology & Assumptions" January 19, 2016.



## S&P Retail Water & Sewer Utility Scorecard Calculation



Source: S&P U.S. Public Finance Waterworks; Sanitary Sewer, And Drainage Utility Systems: Methodology & Assumptions" January 19, 2016.



## S&P Retail Water & Sewer Utility Scorecard

| Enterprise Risk Profile           |        |  |  |  |  |  |  |                    |
|-----------------------------------|--------|--|--|--|--|--|--|--------------------|
| Description                       | Weight | 1  | 2  | 3  | 4  | 5  | 6  | Pos / Neg          |
| Enterprise Risk Profile           |        | Extremely Strong   | Very Strong  | Strong   | Adequate   | Vulnerable   | Highly Vulnerable  | Notching Factors   |
| Economic Fundamentals             | 45%    | Stronger than US rate of GDP growth and/or >100%/125% of US median household effective buying income   | Same/weaker rate than US rate of GDP growth and/or >100%/125% of US median household effective buying income   | Same as US rate of GDP growth and 75-100% of US median household effective buying income   | Same or weaker rate of US GDP growth and 50-75% of US median household effective buying income   | Weaker rate of US GDP growth and 35-75% of US median household effective buying income   | Weaker rate of US GDP growth and <35% of US median household effective buying income   | Economies of scale |
| Industry Risk                     | 20%    | Very low competitive risk of "1" applied to most utilities, given monopolies with autonomy over rates  | -  | -  | -  | -  | -  |                    |
| Market Position                   | 25%    | Utility bill less than 2.25% of Median Household Effective Buying Income and less than 10% of service population living in poverty                                 | Utility bill less than 2.25-4.50% of Median Household Effective Buying Income and less than 20% of service population living in poverty  | Utility bill 4.50%+ of Median Household Effective Buying Income and less than 30% of service population living in poverty  | Utility bill 4.50%+ of Median Household Effective Buying Income and less than 30% of service population living in poverty                                      | Utility bill more than 2.00% of Median Household Effective Buying Income and more than 20-30%+ of service population living in poverty   | Utility bill more than 2.00% of Median Household Effective Buying Income and more than 30% of service population living in poverty | Retail Metric      |
| Operational Management Assessment | 10%    | Strong management, including secure water supply and system capacity. Mgmt communicates long term needs and strategic goals. Multi year, preapproved rate actions. | Strong management, with water supply and system capacity sufficient for existing customer base. Public out reach and transparency on planning. Rate actions done year to year. | Good management, with water supply and system capacity sufficient for existing customer base. Public out reach and transparency on planning. Rate actions done year to year. | Adequate management, with water supply and system capacity needs in 10-20 years. Management depth and breadth limited. Rate actions driven by legal covenants. | Management capabilities limited, with water supply and system capacity not sufficient current. Management depth limited, with reliance on outside parties. Rate actions only driven by weak condition. | -  |                    |

Note: S&P uses a hybrid approach to the rating process for GLWA, whereby retail metrics are considered but within the context of the Wholesale Utility Criteria

Source: S&P U.S. Public Finance Waterworks; Sanitary Sewer, And Drainage Utility Systems: Methodology & Assumptions" January 19, 2016. Certain data from Series 2016 Rating Report. Indicative scores are PFM's interpretation of methodology; actual implementation may differ.



## S&P Retail Water & Sewer Utility Scorecard (Cont'd)

| Financial Risk Profile              |        |  |   |   |  |  |                        |       |
|-------------------------------------|--------|--|---|---|--|--|------------------------|-------|
| Description                         | Weight | 1  | 2   | 3   | 4  | 5  | 6                      | GLWA  |
| Financial Risk Profile              |        | Extremely Strong   | Very Strong   | Strong  | Adequate   | Vulnerable   | Highly Vulnerable      | Score |
| All-in Annual Debt Service Coverage | 40%    | Greater than 1.60X   | 1.40X to < 1.60X  | 1.20X to < 1.40X  | 1.10X to < 1.20X   | 1.00X to < 1.10X   | <1.00X                 | 2     |
| Liquidity and Reserves              | 40%    | Greater than 150 days and more than \$75 million   | 90- 150 days and between \$20-\$75 million  | 60-90 days and between \$5-\$20 million   | 30-60 days and between \$1-\$5 million   | 15-30 days and \$1 million   | <15 days and \$500,000 | 1     |
| Debt and Liabilities                | 10%    | Up to 20%  | 20% to 35%  | 35% to 50%  | 50% to 65%   | 65% to 80%   | >80%                   | 6     |
| Financial Management Assessment     | 10%    | Strong revenue and expense tracking and budget monitoring. Good long-term financial planning and assessment. Formal financial, investment and debt policies. | Revenue and expense tracking and budget monitoring but less robust. Good financial planning but limited in term. Formal financial, investment and debt policies, but may be lacking in certain areas. | Revenue and expense tracking done but with optimistic assumptions. Financial planning but limited updates. Some formal finance policies, but may be lacking in certain areas. | Revenue and expense projections exist, but with optimistic assumptions and limited testing. Financial planning done, but may not be realistic. Finance and investments driven by state requirements. | Revenue and expense projections ignore shortfalls, with no formal review. No long term financial planning done. Absence of formal or informal policies with use of riskier structures. | -                      | 1     |
|                                     |        |  |   |   |  |  |                        |       |

**Note:** S&P uses a hybrid approach to the rating process for GLWA, whereby retail metrics are considered but within the context of the Wholesale Utility Criteria





# Appendix



## Moody's Water & Sewer Sector Outlook

- Anticipate **overall stability** in 2018 supported by strong rate management and liquidity
- Stable debt service coverage levels expected to remain in line with 2016 median of 2.1x represents solid rate management as utilities continue to proactively adjust rates accordingly
- Liquidity, pivotal to the sector's stability, will remain healthy as utilities accumulate reserves for future rate stabilization, unexpected system shocks and capital needs
- Managing the relationship between system investment, financial stability and rate affordability will be key to the sector's credit quality
- Incremental investment continues to lag system depreciation, evidenced by a declining trend in the median useful life of all systems
  - Sufficient funding of system investment is becoming an increasingly important factor within the sector
  - Declining asset conditions increases the risk of operating efficiencies, as well as malfunctions that could lead to system interruptions and regulatory issues
- Continued extreme weather events will present operating and capital challenges for utilities, but they are largely mitigated by availability of state and federal funds



## Fitch's Water & Sewer Sector Outlook

- **Stable outlook**, with the key factors in the sector's performance stability being essentiality of the services, monopolistic nature, and local rate-setting authority
- Fitch expects revenues will climb between 2% and 4% in 2018 based on anticipated adjustments by rated credits, continued flat consumption patterns and improvements in economic conditions nationally, helping to offset rising operating and debt costs and preserve good coverage and robust reserves
- Fitch anticipates a slight decrease in capital spending in 2018 and the years thereafter but indicates sustained capital investment increases will be necessary to preserve service levels over the long term
- Growth in debt levels expected to be muted in 2018, rising 0%-3% based on planned borrowings, should preserve the sector's moderate debt profile
- With user charges continuing to outpace inflationary growth, the issue of affordability is becoming an increasing focus among sector stakeholders and could pressure finance and debt ratios beyond the outlook period
- Regulatory environment is expected to remain uncertain – the pace of new rules by the EPA is expected to be limited in 2018, although delayed revisions to the Lead & Copper Rule could have significant implications for water utilities



## Standard & Poor's Water & Sewer Sector Outlook

- Anticipate **overall stability** with upgrades outpacing downgrades, and S&P believes that decisions on rates and charges will over the long term be the main determinant of whether the sector credit quality remains stable
- With nearly all operating revenues coming from local ratepayers, affordability of rates continues to be a localized risk in a sector that retains a large need for infrastructure investment
- With key assets largely out of sight and out of mind to the public (in contrast to competing priorities such as roads and airports) and mandated compliance projects often taking an outsized share of limited capital dollars, utility managers are increasingly extending replacement cycles and deferring maintenance of assets

| S&P Credit Risks and Opportunities   |   |
|--|---|
| Risks  | Opportunities   |
| <ul style="list-style-type: none"><li>• Elimination of tax-exempt advance refunding transactions and the FOMC's stated intent for three hikes in the federal funds rate in 2018 could make borrowing costs higher for all and will almost surely lead to a steep decline in total bond issuance in 2018</li><li>• The gap between larger utilities (defined by the EPA as a service area population of over 10,000) and smaller ones is increasingly profound</li><li>• As many as half of all water sector employees will be of retirement age or will have retired by the end of this decade; succession planning and mentoring could move from risk to crisis (again, with disproportionate impacts on smaller and rural systems)</li><li>• Capital expenditure dollars are limited and projects must be prioritized. For some, the focus is on what they can afford rather than what they need, which, in our view, introduces the risk of deferred maintenance.</li></ul> | <ul style="list-style-type: none"><li>• The fiscal 2017 federal budget included appropriations for the first loans under the WIFIA; there are also several bills that focus on creating federal appropriations for drinking and clean water and stormwater</li><li>• As in 2017, we do not expect major new environmental regulations in 2018, only updates on those implemented or under development</li><li>• Should a new federal grant require a state match, given the relatively low debt loads across the state sector and increasing awareness of the need for more infrastructure investments, many states might consider leveraging the federal grant with bond proceeds.</li><li>• S&amp;P Global Ratings' economic research states that even in a downside scenario, U.S. gross domestic product (GDP) should still grow in 2018, at 1.6%</li></ul> |

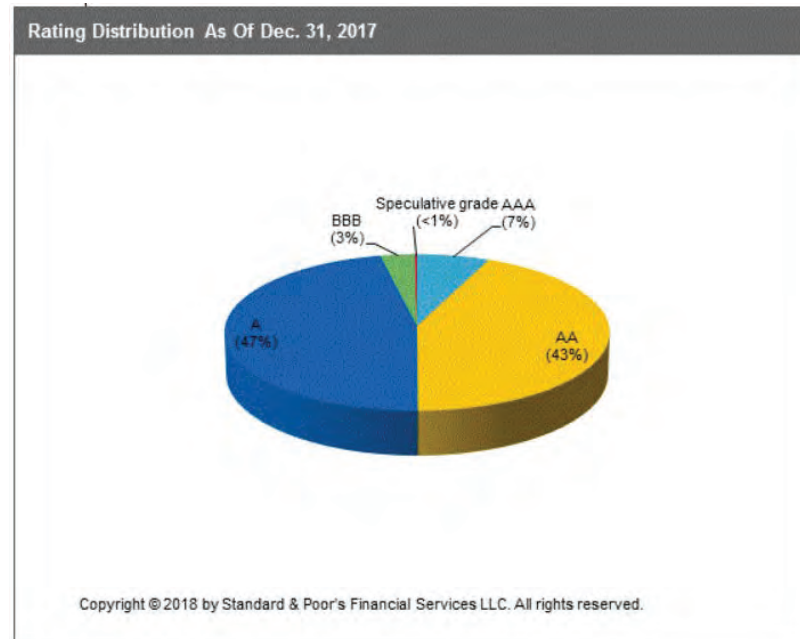


## Standard & Poor's Water & Sewer Sector Outlook

- Most common rating in the sector remains 'A+' and most of existing long-term ratings carry a stable outlook
- Rating transitions were modest in 2017 given that implementation of new criteria was substantially completed in 2016
- Given the lower number of non-stable outlooks, S&P anticipates fewer rating changes during 2018

| Municipal Utility Violations (Systems with One or More Safe Drinking Water Act Violations in 2017) |                    |                           |
|--|--------------------|---------------------------|
| System Size  | % Total Violations | Average population served |
| Very Large   | 0.59%              | 346,502                   |
| Large  | 6.80%              | 26,810                    |
| Medium   | 9.70%              | 5,883                     |
| Small  | 26.86%             | 1,575                     |
| Very Small   | 56.05%             | 237                       |

| S&P Rating Trends                      |       |       |       |       |       |
|--|-------|-------|-------|-------|-------|
|  | 2013  | 2014  | 2015  | 2016  | 2017  |
| Ratings outstanding                    | 1,509 | 1,568 | 1,638 | 1,650 | 1,578 |
| % ratings that changed during the year | 3.9   | 4.4   | 8.6   | 13.9  | 7.79  |
| Upgrades to downgrades                 | 2.9x  | 2.0x  | 2.1x  | 1.9x  | 1.8x  |
| Positive outlooks                      | 26    | 23    | 31    | 14    | 4     |
| Non-stable outlooks                    | 49    | 55    | 70    | 42    | 10    |





## Financial Services Audit Committee Communication

**Date:** March 16, 2018

**To:** Great Lakes Water Authority Audit Committee

**From:** Nicolette Bateson, CPA, Chief Financial Officer & Treasurer

**Re:** Update: FY 2019 – FY 2020 Biennial Budget and FY 2019 – 2023 Financial Plan

**Background:** On January 5, 2018 the Great Lakes Water Authority (GLWA) was presented with discussion draft materials for the FY 2019 – FY 2020 Biennial Budget and FY 2019 – 2023 Financial Plan. Subsequently the draft budget was presented to the GLWA Board at its meeting on January 10, 2018. A combination of materials from both of those meetings was presented at the Customer Outreach meeting on January 11, 2018.

On February 28, 2018, the Public Hearing was held for the FY 2019 – FY 2020 Biennial Budget and FY 2019 Proposed Charges. At that meeting, the GLWA Staff recommended “Scenario 2” of the charges worksheets that were presented to customers which provides a two-year phasing of the 2017 Units of Service recommendations. The Public Hearing remains open as there are related matters under discussion with the Detroit Water & Sewerage Department. This discussion is intended to result in a Memorandum of Understanding related to clarification of certain lease matters.

**Analysis:** Attached are materials distributed to the GLWA Board on February 28, 2018 for review and discussion at the Audit Committee meeting.

**Proposed Action:** Receive and file report.

# Great Lakes Water Authority

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*Supplemental  
FY 2019-2023 Financial  
Plan Information*





Areas for potential budget reductions (Reduce overall O&M Budget from 2% Increase to 0%)  
FY 2019

46% 54%  
46% 54%

| ABCD Group                  | ABCD Descriptions            | Cost Center Description                | Account Description                        | Chief                   | FP&A Liai: | Amount of Cut    | Water           | Sewer           |
|-----------------------------|------------------------------|--|--|-------------------------|------------|------------------|-----------------|-----------------|
| D                           | Administrative               | Organizational Development             | Contractual Operating Services             | Terri - OD              | Sondra Hu  | \$ 700,000.00    | \$ 322,000.00   | \$ 378,000.00   |
| C                           | Centralized Services         | Office of the CIO                      | Contract Services-Information Technology   | Jeff - IT               | Sondra Hu  | \$ 300,000.00    | \$ 138,000.00   | \$ 162,000.00   |
| C                           | Centralized Services         | Info Technology Service Delivery       | Contract Services-Information Technology   | Jeff - IT               | Sondra Hu  | \$ 77,000.00     | \$ 35,420.00    | \$ 41,580.00    |
| C                           | Centralized Services         | Info Technology Service Delivery       | Printing                                   | Jeff - IT               | Sondra Hu  | \$ 100,000.00    | \$ 46,000.00    | \$ 54,000.00    |
| C                           | Centralized Services         | Info Technology Enterprise Application | Contract Services-Information Technology   | Jeff - IT               | Sondra Hu  | \$ 300,000.00    | \$ 138,000.00   | \$ 162,000.00   |
| C                           | Centralized Services         | Info Technology Business Application   | Technology                                 | Jeff - IT               | Sondra Hu  | \$ 200,000.00    | \$ 92,000.00    | \$ 108,000.00   |
| C                           | Centralized Services         | Info Technology Business Application   | Repairs & Maintenance-Software             | Jeff - IT               | Sondra Hu  | \$ 1,000,000.00  | \$ 460,000.00   | \$ 540,000.00   |
| B-CSO                       | Wastewater System Operations | Baby Creek Combined Sewer Overflow     | Utilities - Sewage                         | Suzanne - Wastewater    | Robert Arl | \$ 55,900.00     |                 | \$ 55,900.00    |
| B-CSO                       | Wastewater System Operations | St Aubin Combined Sewer Overflow       | Utilities - Sewage                         | Suzanne - Wastewater    | Robert Arl | \$ 10,000.00     |                 | \$ 10,000.00    |
| B-CSO                       | Wastewater System Operations | Leib Combined Sewer Overflow           | Utilities - Sewage                         | Suzanne - Wastewater    | Robert Arl | \$ 10,000.00     |                 | \$ 10,000.00    |
| B-CSO                       | Wastewater System Operations | Baby Creek Combined Sewer Overflow     | Utilities - Water                          | Suzanne - Wastewater    | Robert Arl | \$ 87,600.00     |                 | \$ 87,600.00    |
| B-CSO                       | Wastewater System Operations | St Aubin Combined Sewer Overflow       | Utilities - Water                          | Suzanne - Wastewater    | Robert Arl | \$ 20,000.00     |                 | \$ 20,000.00    |
| B-CSO                       | Wastewater System Operations | Leib Combined Sewer Overflow           | Utilities - Water                          | Suzanne - Wastewater    | Robert Arl | \$ 20,000.00     |                 | \$ 20,000.00    |
| B                           | Wastewater System Operations | Wastewater Operations                  | Utilities - Water                          | Suzanne - Wastewater    | Robert Arl | \$ 130,000.00    |                 | \$ 130,000.00   |
| B                           | Wastewater System Operations | Wastewater Process Control             | Contractual Operating Services             | Suzanne - Wastewater    | Robert Arl | \$ 830,000.00    |                 | \$ 830,000.00   |
| B                           | Wastewater System Operations | Wastewater Incineration Process        | Operating Supplies-Chemicals               | Suzanne - Wastewater    | Robert Arl | \$ 400,000.00    |                 | \$ 400,000.00   |
| B                           | Wastewater System Operations | Wastewater Secondary Process           | Operating Supplies-Chemicals               | Suzanne - Wastewater    | Robert Arl | \$ 390,000.00    |                 | \$ 390,000.00   |
| B                           | Wastewater System Operations | Wastewater Primary Process             | Operating Supplies-Chemicals               | Suzanne - Wastewater    | Robert Arl | \$ 500,000.00    |                 | \$ 500,000.00   |
| B                           | Wastewater System Operations | Wastewater Dewatering Process          | Operating Supplies-Chemicals               | Suzanne - Wastewater    | Robert Arl | \$ 300,000.00    |                 | \$ 300,000.00   |
| B                           | Wastewater System Operations | Industrial Waste Control               | Postage                                    | Suzanne - Wastewater    | Robert Arl | \$ 20,000.00     |                 | \$ 20,000.00    |
| B                           | Wastewater System Operations | Industrial Waste Control               | Repairs & Maintenance-Equipment            | Suzanne - Wastewater    | Robert Arl | \$ 30,000.00     |                 | \$ 30,000.00    |
| C                           | Centralized Services         | Facility Operations                    | Contractual Buildings & Ground Maintenance | Cheryl - Facilities     | Charise Cc | \$ 2,000,000.00  | \$ 920,000.00   | \$ 1,080,000.00 |
| C                           | Centralized Services         | Field Service Operations               | Contractual Operating Services             | Cheryl - Field Services | Charise Cc | \$ 3,000,000.00  | \$ 1,380,000.00 | \$ 1,620,000.00 |
| C                           | Centralized Services         | Field Service Operations               | Operating Supplies                         |                         | Charise Cc | \$ 1,000,000.00  | \$ 460,000.00   | \$ 540,000.00   |
| Potential (                 |                              |  |  |                         |            | \$ 11,480,500.00 | \$ 3,991,420.00 | \$ 7,489,080.00 |
|                             |                              |  |  |                         |            | Target:          |                 |                 |
| Potential Cuts Needed:      |                              |  |  |                         |            | \$ 6,561,800.00  | \$ 9,310,000.00 |                 |
| Remaining Cuts to Identify: |                              |  |  |                         |            | \$ 2,570,380.00  | \$ 1,820,920.00 |                 |



## GLWA FINANCIAL METRICS & SELECTED PEER COMPARISON (AS REPORTED BY MOODY'S)

### SELECTED PEER GROUP

| Issuer   | System Type | ~Population Served (Retail + Wholesale) | Moody's | S&P | Fitch |
|--|-------------|---|---------|-----|-------|
| Baltimore (City of) Sewer Enterprise, MD                       | Sewer       | 1,800,000                               | Aa2     | AA  | -     |
| Baltimore (City of) Water Enterprise, MD                       | Water       | 1,500,000                               | Aa2     | AA  | -     |
| Boston Water & Sewer Commission, MA                            | Combined    | 800,000                                 | Aa1     | AA+ | AA+   |
| Cleveland (City of) Water Enterprise, OH                       | Water       | 1,400,000                               | Aa1     | AA  | -     |
| District of Columbia Water & Sewer Authority, DC               | Combined    | 2,200,000                               | Aa1     | AAA | AA    |
| Great Lakes Water Authority (DWSD), MI – Water Enterprise      | Water       | 3,800,000                               | A3      | A-  | A     |
| Great Lakes Water Authority (DWSD), MI – Sewer Enterprise      | Sewer       | 2,800,000                               | A3      | A-  | A     |
| New York City Municipal Water Finance Authority, NY            | Combined    | 8,000,000                               | Aa1     | AA+ | AA+   |
| Northeast Ohio Regional Sewer District, OH                     | Sewer       | 1,000,000                               | Aa1     | AA+ | -     |
| Philadelphia (City of) Water and Sewer Enterprise, PA          | Combined    | 2,000,000                               | A1      | A+  | A+    |
| San Francisco Public Utilities Commission Sewer Enterprise, CA | Sewer       | 1,000,000                               | Aa3     | AA  | -     |
| San Francisco Public Utilities Commission Water Enterprise, CA | Water       | 2,600,000                               | Aa3     | AA- | -     |

Source: Ratings from EMMA as of January 12, 2017.. Figures from Moody's MFRA as of January 12, 2017. Moody's MFRA data as of FY16 for SFPUC, FY15 for NY Water, Philadelphia Water, Boston WSC, Cleveland Water, DC Water, GLWA and Northeast Ohio Regional Sewer District; and as of FY14 for Baltimore Water & Sewer

## GLWA FINANCIAL METRICS & SELECTED PEER COMPARISON (AS REPORTED BY MOODY'S)

### COVERAGE METRICS

| Issuer  | Senior Debt Service Coverage |              | Total Debt Service Coverage |              |
|---|------------------------------|--------------|-----------------------------|--------------|
|   | Actual (x)                   | Required (x) | Actual (x)                  | Required (x) |
| Baltimore (City of) Sewer Enterprise, MD      | 2.2                          | 1.15         | 1.8                         | 1.00         |
| Baltimore (City of) Water Enterprise, MD      | 2.1                          | 1.15         | 1.7                         | 1.00         |
| Boston Water & Sewer Commission, MA           | 2.0                          | 1.25         | 1.6                         | 1.00         |
| Cleveland (City of) Water Enterprise, OH      | 2.3                          | 1.25         | 2.2                         | 1.00         |
| DC Water & Sewer Authority, DC                | 5.0                          | 1.20         | 2.0                         | 1.00         |
| Great Lakes Water Authority (DWSD), MI – W    | 1.4                          | 1.20         | 1.4                         | 1.00         |
| Great Lakes Water Authority (DWSD), MI – S    | 1.4                          | 1.20         | 1.4                         | 1.00         |
| NY City Municipal Water Finance Authority, NY | 12.4                         | 1.15         | 5.4                         | 1.00         |
| Northeast Ohio Regional Sewer District, OH    | 2.0                          | 1.15         | 1.6                         | 1.00         |
| Philadelphia Water and Sewer Enterprise, PA   | 1.5                          | 1.20         | 1.5                         | 1.00         |
| San Francisco PUC Sewer Enterprise, CA        | 1.8                          | 1.25         | 1.8                         | 1.00         |
| San Francisco PUC Water Enterprise, CA        | 1.3                          | 1.25         | 1.3                         | 1.00         |

Source: Figures from Moody's MFRA as of January 12, 2017. Moody's MFRA data as of FY16 for SFPUC, FY15 for NY Water, Philadelphia Water, Boston WSC, Cleveland Water, DC Water, GLWA and Northeast Ohio Regional Sewer District; and as of FY14 for Baltimore Water & Sewer. Debt service coverage is calculated as adjusted by Moody's and may not align with indenture calculations.

Note: GLWA Senior and Total Debt Service Coverage as shown by MFRA, which shows all debt service for GLWA as Senior Debt Service.



## GLWA FINANCIAL METRICS & SELECTED PEER COMPARISON (AS REPORTED BY MOODY'S)

### LIQUIDITY AND DEBT METRICS

| Issuer  | Days Cash   |                             |            | Debt to Operating Revenues          |                             |                                |
|---|---|-----------------------------|------------|-------------------------------------|-----------------------------|--------------------------------|
|   | Total Current Cash, Cash Equivalents and Investments (\$000s) | Total O&M Expenses (\$000s) | Day's Cash | Long-Term Debt Outstanding (\$000s) | Operating Revenues (\$000s) | Debt to Operating Revenues (x) |
| Baltimore (City of) Sewer Enterprise, MD      | 97,705  | 123,993                     | 287.6      | 893,942                             | 221,181                     | 4.04                           |
| Baltimore (City of) Water Enterprise, MD      | 38,768  | 113,947                     | 124.2      | 656,121                             | 158,678                     | 4.13                           |
| Boston Water & Sewer Commission, MA           | 8,647   | 272,767                     | 11.6*      | 512,895                             | 349,002                     | 1.47                           |
| Cleveland (City of) Water Enterprise, OH      | 296,294   | 166,580                     | 649.2      | 800,953                             | 301,276                     | 2.66                           |
| DC Water & Sewer Authority, DC                | 197,084   | 274,366                     | 262.2      | 2,548,506                           | 549,915                     | 4.63                           |
| Great Lakes Water Authority (DWSD), MI – W    | 99,145  | 160,773                     | 225.1      | 2,424,380                           | 364,278                     | 6.66                           |
| Great Lakes Water Authority (DWSD), MI – S    | 197,070   | 210,702                     | 341.4      | 3,533,419                           | 505,672                     | 6.99                           |
| NY City Municipal Water Finance Authority, NY | 1,238,122   | 1,517,132                   | 297.9      | 30,933,343                          | 3,791,135                   | 8.16                           |
| Northeast Ohio Regional Sewer District, OH    | 396,851   | 106,047                     | 1365.9     | 1,617,836                           | 280,430                     | 5.77                           |
| Philadelphia Water and Sewer Enterprise, PA   | 80,070  | 376,528                     | 77.6       | 2,110,797                           | 676,867                     | 3.12                           |
| San Francisco PUC Sewer Enterprise, CA        | 159,241   | 175,501                     | 331.2      | 1,007,593                           | 254,531                     | 3.96                           |
| San Francisco PUC Water Enterprise, CA        | 324,052   | 220,622                     | 536.1      | 4,193,155                           | 417,429                     | 10.05                          |

\*Although BWSC typically reports \$5-10 million in unrestricted cash balances, total system liquidity is generally more robust due to a number of designated operating reserves that, although reported as restricted, generally are available for any lawful purpose

Source: Figures from Moody's MFRA as of January 12, 2017. Moody's MFRA data as of FY16 for SFPUC, FY15 for NY Water, Philadelphia Water, Boston WSC, Cleveland Water, DC Water, GLWA and Northeast Ohio Regional Sewer District; and as of FY14 for Baltimore Water & Sewer.

## GLWA FINANCIAL METRICS & SELECTED PEER COMPARISON (AS REPORTED BY MOODY'S)

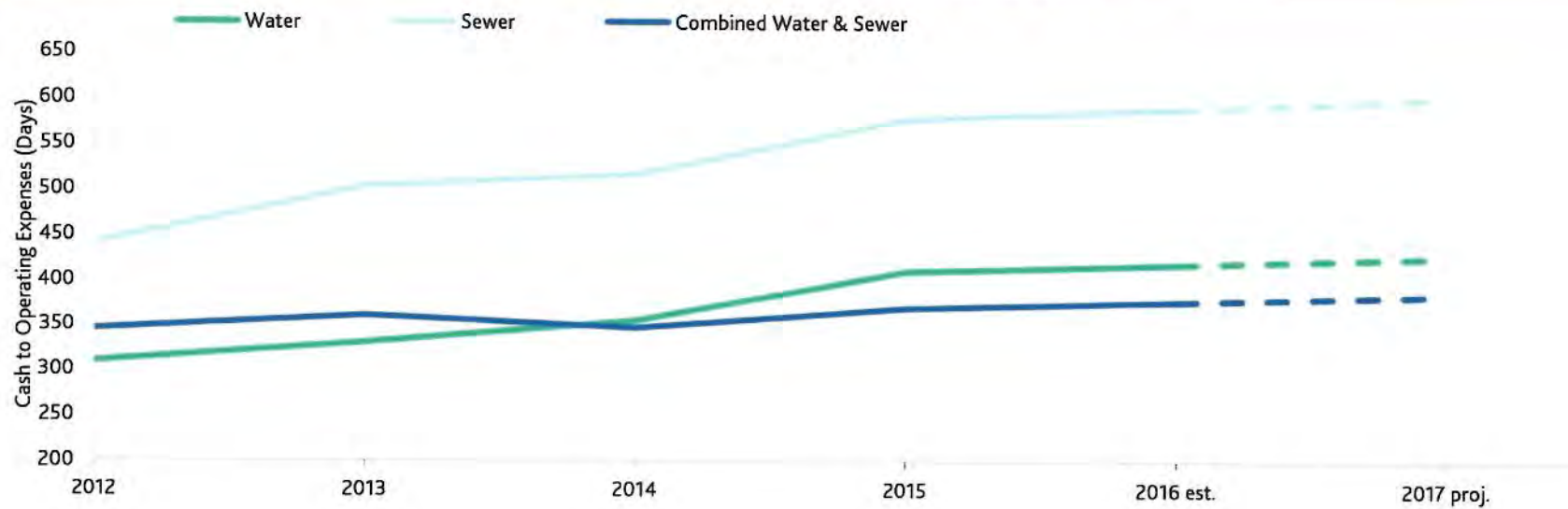
### DEBT METRICS

| Issuer   | Population Served (Retail + Wholesale) | Long-Term Debt per Capita           |                      |
|--|--|-------------------------------------|----------------------|
|  |  | Long-Term Debt Outstanding (\$000s) | Debt Per Capita (\$) |
| Baltimore (City of) Sewer Enterprise, MD         | 1,800,000                              | 893,942                             | 497                  |
| Baltimore (City of) Water Enterprise, MD         | 1,500,000                              | 656,121                             | 437                  |
| Boston Water & Sewer Commission, MA              | 800,000                                | 512,895                             | 641                  |
| Cleveland (City of) Water Enterprise, OH         | 1,400,000                              | 800,953                             | 572                  |
| District of Columbia Water & Sewer Authority, DC | 2,200,000                              | 2,548,506                           | 1,158                |
| Great Lakes Water Authority (DWSD), MI – W       | 3,800,000                              | 2,424,380                           | 638                  |
| Great Lakes Water Authority (DWSD), MI – S       | 2,800,000                              | 3,533,419                           | 1,262                |
| NY City Municipal Water Finance Authority, NY    | 8,000,000                              | 30,933,343                          | 3,867                |
| Northeast Ohio Regional Sewer District, OH       | 1,000,000                              | 1,617,836                           | 1,618                |
| Philadelphia Water and Sewer Enterprise, PA      | 2,000,000                              | 2,110,797                           | 1,055                |
| San Francisco PUC Sewer Enterprise, CA           | 1,000,000                              | 1,007,593                           | 1,008                |
| San Francisco PUC Water Enterprise, CA           | 2,600,000                              | 4,193,155                           | 1,613                |

Source: Long-term debt figures from Moody's MFRA as of January 12, 2017. Population served from latest issuer filings with EMMA as of January 12, 2016. Moody's MFRA data as of FY16 for SFPUC, FY15 for NY Water, Philadelphia Water, Boston WSC, Cleveland Water, DC Water, GLWA and Northeast Ohio Regional Sewer District; and as of FY14 for Baltimore Water & Sewer

## TRENDS IN WATER & SEWER SYSTEM LIQUIDITY

Sector Median Unrestricted Cash to Operating Expenses



Source: Moody's Report, "2017 Outlook – Revenue Raising Flexibility Supports Sound Financial Metrics," December 7, 2016.



# Impact of Net Revenue Adjustments on Debt Service Coverage Ratios

- A \$1 million adjustment to Net Revenues impacts debt service coverage ratios by ...

|  | <u>Water<br/>System</u> | <u>Sewer<br/>System</u> |
|--|-------------------------|-------------------------|
| <u>Debt Service</u>  |                         |                         |
| 1 Senior Lien  | 127,687,400             | 142,376,800             |
| 2 Senior Lien + Second Lien  | 170,540,200             | 186,366,900             |
| 3 All Bonds  | 172,905,300             | 233,252,400             |
| <u>Impact on Coverage of a \$1 million adjustment to Net Revenue</u> |                         |                         |
| 4 Senior Lien  | 0.008                   | 0.007                   |
| 5 Senior Lien + Second Lien  | 0.006                   | 0.005                   |
| 6 All Bonds  | 0.006                   | 0.004                   |

# FY 2019 BUDGET and "System Charge" Adjustments

- Average "System Charge Adjustment" is 2.7% for Water and 1.1% for Sewer

|  | Water System   |                |               |                 | Sewer System   |                |               |                 | Total GLWA     |                |               |                 |
|--|----------------|----------------|---------------|-----------------|----------------|----------------|---------------|-----------------|----------------|----------------|---------------|-----------------|
| <u>Annual BUDGET</u>                       | <u>FY 2018</u> | <u>FY 2019</u> | <u>Change</u> | <u>% Change</u> | <u>FY 2018</u> | <u>FY 2019</u> | <u>Change</u> | <u>% Change</u> | <u>FY 2018</u> | <u>FY 2019</u> | <u>Change</u> | <u>% Change</u> |
| Operation and Maintenance Expense          | 121.6          | 125.3          | 3.7           | 3.1%            | 191.1          | 193.1          | 2.0           | 1.1%            | 312.6          | 318.4          | 5.8           | 1.9%            |
| Master Bond Ordinance Commitments          | 173.7          | 171.3          | (2.4)         | -1.4%           | 262.5          | 269.7          | 7.2           | 2.7%            | 436.2          | 441.0          | 4.8           | 1.1%            |
| Deposit to Improvement & Extension Fund    | 32.8           | 38.0           | 5.2           | 15.9%           | 11.9           | 12.0           | 0.1           | 0.7%            | 44.7           | 50.0           | 5.3           | 11.8%           |
| <b>TOTAL BUDGET</b>                        | <b>328.1</b>   | <b>334.7</b>   | <b>6.6</b>    | <b>2.0%</b>     | <b>465.5</b>   | <b>474.8</b>   | <b>9.3</b>    | <b>2.0%</b>     | <b>793.6</b>   | <b>809.5</b>   | <b>15.9</b>   | <b>2.0%</b>     |
| <u>less: "Non Customer" Revenue</u>        |                |                |               |                 |                |                |               |                 |                |                |               |                 |
| Investment Earnings & Miscellaneous        | (4.2)          | (3.8)          | 0.4           | -9.7%           | (2.8)          | (4.6)          | (1.8)         | 66.2%           | (7.0)          | (8.4)          | (1.4)         | 20.1%           |
| Genesee County Drain Commission            | (3.7)          | 0.0            | 3.7           | -100.0%         | NA             | NA             | NA            | NA              | (3.7)          | 0.0            | 3.7           | -100.0%         |
| Subtotal Revenue Requirement "Offsets"     | (7.9)          | (3.8)          | 4.1           | -51.7%          | (2.8)          | (4.6)          | (1.8)         | 66.2%           | (10.7)         | (8.4)          | 2.3           | -21.4%          |
| Preliminary Revenue Req't from Charges     | 320.2          | 330.8          | 10.7          | 3.3%            | 462.7          | 470.2          | 7.5           | 1.6%            | 782.9          | 801.1          | 18.2          | 2.3%            |
| plus: Expected "System" Bad Debt           | 1.3            | 1.5            | 0.3           | 19.8%           | 7.2            | 4.7            | (2.5)         | -35.4%          | 8.5            | 6.2            | (2.3)         | -27.1%          |
| Revenue Required from Charges              | 321.4          | 332.4          | 10.9          | 3.4%            | 469.9          | 474.9          | 4.9           | 1.1%            | 791.4          | 807.3          | 15.9          | 2.0%            |
| Proforma Billed Revenue - Existing Charges | 321.4          | 323.6          | 2.2           | 0.7%            | 469.9          | 470.0          | 0.0           | 0.0%            | 791.4          | 793.6          | 2.2           | 0.3%            |
| Charge Revenue Adjustment Needed           |                | 8.8            |               |                 |                | 4.9            |               |                 |                | 13.7           |               |                 |
| % Charge Revenue Adjustment Needed         |                | <b>2.7%</b>    |               |                 |                | <b>1.1%</b>    |               |                 |                | <b>1.7%</b>    |               |                 |



# Sewer System Revenue Requirement for FY 2019 (i.e. BUDGET) & Five-Year Plan

|  | Sewer              |                    |                    |                    |                    |                    |
|--|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|  | FY 2018            | FY 2019            | FY 2020            | FY 2021            | FY 2022            | FY 2023            |
| <b>Revenue Requirement Elements</b>                    |                    |                    |                    |                    |                    |                    |
| <b>O&amp;M</b>   | 191,079,400        | 193,122,000        | 206,772,800        | 207,253,000        | 213,914,600        | 213,336,900        |
| <i>O&amp;M Percent Change</i>                          |                    | 1%                 | 7%                 | 0%                 | 3%                 | 0%                 |
| <b>MBO Commitments</b>                                 | 260,743,000        | 269,677,500        | 280,055,900        | 281,611,500        | 292,071,900        | 284,378,600        |
| <i>MBO Percent Change</i>                              |                    | 3%                 | 4%                 | 1%                 | 4%                 | -3%                |
| <b>I&amp;E</b>   | 13,677,700         | 12,010,600         | 6,973,800          | 24,690,100         | 28,110,300         | 57,745,200         |
| <i>I&amp;E Percent Change</i>                          |                    | -12%               | -42%               | 254%               | 14%                | 105%               |
| <b>Total</b>   | <b>465,500,100</b> | <b>474,810,100</b> | <b>493,802,500</b> | <b>513,554,600</b> | <b>534,096,800</b> | <b>555,460,700</b> |
|  |                    | <u>2.0%</u>        | <u>4.0%</u>        | <u>4.0%</u>        | <u>4.0%</u>        | <u>4.0%</u>        |
| <b>Draft Revenue Requirement Elements as a Percent</b> |                    |                    |                    |                    |                    |                    |
| <b>O&amp;M</b>   | 41.0%              | 40.7%              | 41.9%              | 40.4%              | 40.1%              | 38.4%              |
| <b>MBO Commitments</b>                                 | 56.0%              | 56.8%              | 56.7%              | 54.8%              | 54.7%              | 51.2%              |
| <b>I&amp;E</b>   | 2.9%               | 2.5%               | 1.4%               | 4.8%               | 5.3%               | 10.4%              |
| <b>Total</b>   | 100.0%             | 100.0%             | 100.0%             | 100.0%             | 100.0%             | 100.0%             |

- ✓ Preserves commitment to 4% promise with 2% BUDGET increase for FY 2019.
- ✓ Relatively modest increase to I&E transfer over the five-year plan; objective is to strategically vary by fiscal year to manage charge adjustments and capital funding.



# Water System Revenue Requirement for FY 2019 (i.e. BUDGET) & Five-Year Plan

|  | Water              |                    |                    |                    |                    |                    |
|--|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|  | FY 2018            | FY 2019            | FY 2020            | FY 2021            | FY 2022            | FY 2023            |
| <b>Revenue Requirement Elements</b>                    |                    |                    |                    |                    |                    |                    |
| <b>O&amp;M</b>   | 121,562,000        | 125,311,800        | 148,145,500        | 151,587,200        | 155,712,200        | 150,153,200        |
| <i>O&amp;M Percent Change</i>                          |                    | 3%                 | 18%                | 2%                 | 3%                 | -4%                |
| <b>MBO Commitments</b>                                 | 173,735,500        | 171,344,400        | 182,744,100        | 191,986,500        | 192,811,700        | 201,434,300        |
| <i>MBO Percent Change</i>                              |                    | -1%                | 7%                 | 5%                 | 0%                 | 4%                 |
| <b>I&amp;E</b>   | 32,821,200         | 38,024,900         | 17,178,700         | 18,417,300         | 27,946,700         | 39,941,900         |
| <i>I&amp;E Percent Change</i>                          |                    | 16%                | -55%               | 7%                 | 52%                | 43%                |
| <b>Total</b>   | <b>328,118,700</b> | <b>334,681,100</b> | <b>348,068,300</b> | <b>361,991,000</b> | <b>376,470,600</b> | <b>391,529,400</b> |
|  |                    | <u>2.0%</u>        | <u>4.0%</u>        | <u>4.0%</u>        | <u>4.0%</u>        | <u>4.0%</u>        |
| <b>Draft Revenue Requirement Elements as a Percent</b> |                    |                    |                    |                    |                    |                    |
| <b>O&amp;M</b>   | 37.0%              | 37.4%              | 42.6%              | 41.9%              | 41.4%              | 38.4%              |
| <b>MBO Commitments</b>                                 | 52.9%              | 51.2%              | 52.5%              | 53.0%              | 51.2%              | 51.4%              |
| <b>I&amp;E</b>   | 10.0%              | 11.4%              | 4.9%               | 5.1%               | 7.4%               | 10.2%              |
| <b>Total</b>   | 100.0%             | 100.0%             | 100.0%             | 100.0%             | 100.0%             | 100.0%             |

- ✓ Preserves commitment to 4% promise with 2% BUDGET increase for FY 2019.
- ✓ Relatively modest increase to I&E transfer over the five-year plan; objective is to strategically vary by fiscal year to manage charge adjustments and capital funding.

## Great Lakes Water Authority

## Improvement &amp; Extension Funds and Construction Bond Funds

DISCUSSION DRAFT as of February 28, 2018 - FY 2019 &amp; FY 2020 Biennial Budget and Five Year Plan (FY 2019 thru FY 2023)

Based on Revised FY 2019 - 2013 Capital Improvement Plan presented February 2018

Net Position Analysis (principally cash less accounts payable for these funds)

|   | As of<br>6/30/2017 | Projected<br>FY 2018 | FY 2019       | FY 2020       | FY 2021       | FY 2022       | FY 2023       |
|---|--------------------|----------------------|---------------|---------------|---------------|---------------|---------------|
| <b>Water Improvement &amp; Extension Fund</b> |                    | 184,000,000          | 204,795,100   | 207,514,600   | 194,721,300   | 101,868,300   | 88,821,700    |
| <b>Sources</b>                                |                    | 32,821,200           | 38,024,900    | 17,178,700    | 18,417,300    | 27,596,700    | 34,241,900    |
| <b>Uses</b>                                   |                    | (12,026,100)         | (35,305,400)  | (29,972,000)  | (111,270,300) | (40,643,300)  | (19,407,800)  |
| <b>Net Activity</b>                           |                    | 20,795,100           | 2,719,500     | (12,793,300)  | (92,853,000)  | (13,046,600)  | 14,834,100    |
| <b>Ending Balance</b>                         | 184,000,000        | 204,795,100          | 207,514,600   | 194,721,300   | 101,868,300   | 88,821,700    | 103,655,800   |
| <br><b>Water Construction Bond Fund</b>       |                    | 173,000,000          | 143,272,000   | 91,149,000    | 110,237,000   | 47,476,000    | 40,708,000    |
| <b>Sources</b>                                |                    | 10,315,000           | 13,915,000    | 156,671,000   | 92,973,000    | 171,532,000   | 157,507,000   |
| <b>Uses</b>                                   |                    | (40,043,000)         | (66,038,000)  | (137,583,000) | (155,734,000) | (178,300,000) | (175,174,000) |
| <b>Net Activity</b>                           |                    | (29,728,000)         | (52,123,000)  | 19,088,000    | (62,761,000)  | (6,768,000)   | (17,667,000)  |
| <b>Ending Balance</b>                         | 173,000,000        | 143,272,000          | 91,149,000    | 110,237,000   | 47,476,000    | 40,708,000    | 23,041,000    |
|   | 357,000,000        | 348,067,100          | 298,663,600   | 304,958,300   | 149,344,300   | 129,529,700   | 126,696,800   |
| <br><b>Sewer Improvement &amp; Extension</b>  |                    | 115,000,000          | 116,651,600   | 111,393,200   | 109,074,100   | 122,823,400   | 133,534,700   |
| <b>Sources</b>                                |                    | 13,677,700           | 9,010,600     | 18,373,800    | 31,840,100    | 36,610,300    | 57,395,200    |
| <b>Uses</b>                                   |                    | (12,026,100)         | (14,269,000)  | (20,692,900)  | (18,090,800)  | (25,899,000)  | (21,551,200)  |
| <b>Net Activity</b>                           |                    | 1,651,600            | (5,258,400)   | (2,319,100)   | 13,749,300    | 10,711,300    | 35,844,000    |
| <b>Ending Balance</b>                         | 115,000,000        | 116,651,600          | 111,393,200   | 109,074,100   | 122,823,400   | 133,534,700   | 169,378,700   |
| <br><b>Sewer Construction Bond Fund</b>       |                    | 136,000,000          | 115,142,000   | 60,767,000    | 72,050,000    | 129,917,000   | 19,739,000    |
| <b>Sources</b>                                |                    | 49,774,000           | 50,808,000    | 122,438,000   | 169,819,000   | 26,233,000    | 167,767,000   |
| <b>Uses</b>                                   |                    | (70,632,000)         | (105,183,000) | (111,155,000) | (111,952,000) | (136,411,000) | (168,458,000) |
| <b>Net Activity</b>                           |                    | (20,858,000)         | (54,375,000)  | 11,283,000    | 57,867,000    | (110,178,000) | (691,000)     |
| <b>Ending Balance</b>                         | 136,000,000        | 115,142,000          | 60,767,000    | 72,050,000    | 129,917,000   | 19,739,000    | 19,048,000    |
| <br><b>Total</b>                              | 251,000,000        | 231,793,600          | 172,160,200   | 181,124,100   | 252,740,400   | 153,273,700   | 188,426,700   |



**TFG**  
**THE FOSTER GROUP**

P.O. BOX 26282  
LEAWOOD, KS 66225  
TEL: (913) 345-1410  
FAX: (913) 345-1640

**THE FOSTER GROUP, LLC**  
BART FOSTER, PRESIDENT  
CELL: (913) 530-6240  
BFOSTER@FOSTERGROUPLLC.COM

**MEMORANDUM**

Summary of FY 2019 BUDGET Changes

February 27, 2018

To: Nicolette Bateson

From: Bart Foster

You have asked for commentary and observations regarding a comparison of the FY 2019 GLWA BUDGET<sup>1</sup> request with that utilized for the FY 2018 water and sewer charges. The accompanying exhibits present a high level summary of our review.

As noted in prior correspondence on this matter, the FY 2019 BUDGET request represents a 2% increase compared to FY 2018 figures for both the Water Fund and the Sewer Fund. The executive summary budget request categorizes the overall revenue requirements into three major categories:

- Operation and maintenance expenses for the Regional System;
- Master Bond Ordinance (MBO) requirements, the largest of which is debt service; and
- Planned deposits to the Regional System account of the Improvement and Extension (I&E) Fund to finance capital improvements.

The left side of the attached exhibits present the relative changes in each of these categories when comparing the FY 2019 and FY 2018 figures. As noted on Exhibit Page 1, the 2% increase for the Water Fund is characterized by a moderate operating expense increase, a reduction in MBO requirements (largely associated with a naturally occurring reduction in debt service related to the optimized structure resulting from the Series 2016 Refunding Bonds), and a material increase in expected transfers to the I&E Fund. The changes in the operating expense increase is summarized by major cost pool is shown on the right side of Exhibit Page 1, and reflect moderate increases in each major cost pool.

The same presentation is made for the Sewer Fund BUDGET on Exhibit Page 2. The majority of the 2% BUDGET increase is related to increased MBO requirements. The sewer debt service for FY 2019 reflects a natural increase that results from the optimized structure resulting from the Series 2016 Refunding Bonds. As we have noted in prior correspondence, the Sewer operating expense increase is a combination of significant increases in the Combined Sewer Overflow (CSO) and Oakland Macomb Interceptor (OMID) cost pools, and reductions in the Common-to-All (CTA SHARES) and Industrial Waste Control (IWC) cost pools.

We trust that this brief summary is responsive to your request and we are prepared to discuss this matter at your convenience.

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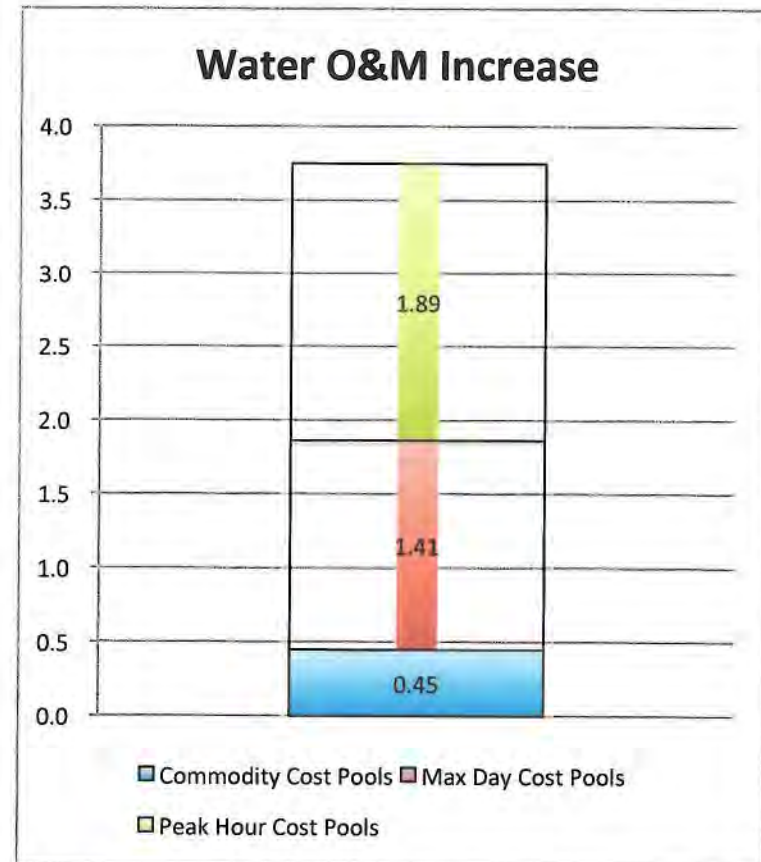
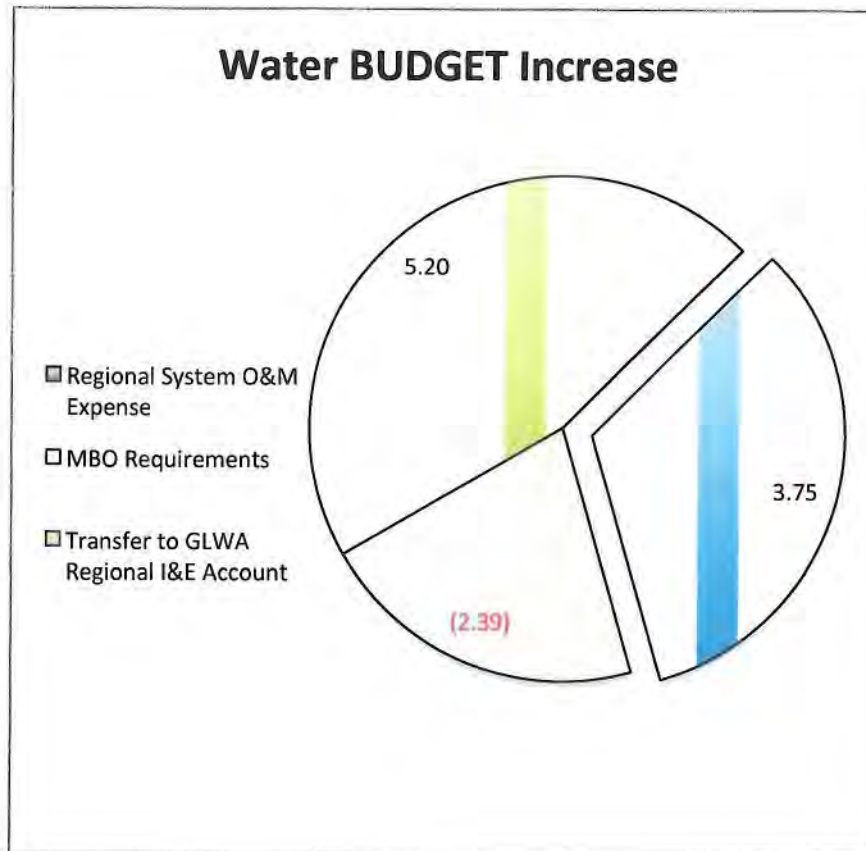
<sup>1</sup> In keeping with prior presentations, reference to the BUDGET in all capital letters is intended to apply to the comprehensive revenue requirement, including the operation and maintenance expenses, debt service and other Master Bond Ordinance requirements, and deposits to the GLWA Regional Improvement and Extension Account.

Summary of FY 2019 Water BUDGET Changes Compared to FY 2018 BUDGET - \$ millions

Exhibit Page 1

|                                       | Water BUDGET Increase |       |
|---------------------------------------|-----------------------|-------|
| Regional System O&M Expense           | 3.75                  | 3.1%  |
| MBO Requirements                      | (2.39)                | 2.7%  |
| Transfer to GLWA Regional I&E Account | 5.20                  | 15.9% |
|                                       | -----                 |       |
| Total Gross BUDGET                    | 6.56                  | 2.0%  |

|                      | O&M Increase |
|----------------------|--------------|
| Commodity Cost Pools | 0.45         |
| Max Day Cost Pools   | 1.41         |
| Peak Hour Cost Pools | 1.89         |
|                      | -----        |
| Total O&M Budget     | 3.75         |



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PRELIMINARY

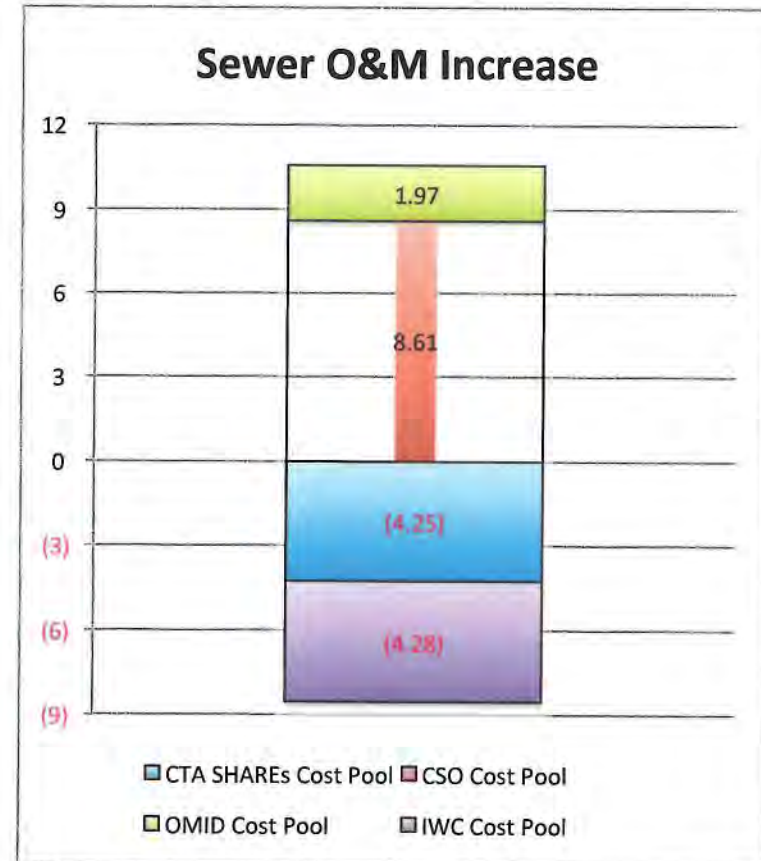
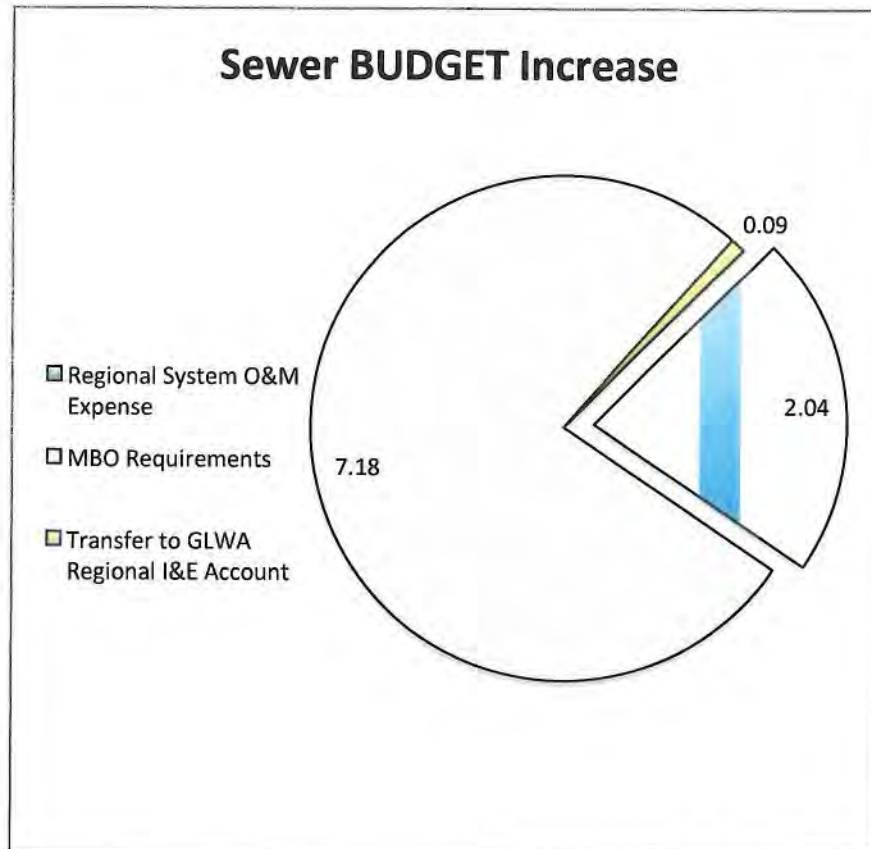
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Summary of FY 2019 Sewer BUDGET Changes Compared to FY 2018 BUDGET - \$ millions

Exhibit Page 2

|                                       | <u>Sewer BUDGET Increase</u> |      |
|---------------------------------------|------------------------------|------|
| Regional System O&M Expense           | 2.04                         | 1.1% |
| MBO Requirements                      | 7.18                         | 2.7% |
| Transfer to GLWA Regional I&E Account | 0.09                         | 0.7% |
|                                       | -----                        |      |
| Total Gross BUDGET                    | 9.31                         | 2.0% |

|                      | <u>O&amp;M Increase</u> |
|----------------------|-------------------------|
| CTA SHAREs Cost Pool | (4.25)                  |
| CSO Cost Pool        | 8.61                    |
| OMID Cost Pool       | 1.97                    |
| IWC Cost Pool        | (4.28)                  |
|                      | -----                   |
| Total O&M Budget     | 2.04                    |







## Financial Services Audit Committee Communication

**Date:** March 16, 2018

**To:** Great Lakes Water Authority Audit Committee

**From:** Nicolette N. Bateson, CPA, Chief Financial Officer/Treasurer

**Re:** Request for Extension to File FY 2017 Annual Audit

**Background:** The fiscal year ended June 30, 2017 is the Great Lakes Water Authority's (GLWA) first twelve-month fiscal year. The year-end audit fieldwork began in October 2017, less than three months after completing the opening balancing sheet and initial six-month operational period ended June 30, 2016.

Michigan Public Act 2 of 1968 (PA 2 of 1968), the Uniform Budgeting and Accounting Act, establishes requirements for the submission of local government audits, including authorities, to the State of Michigan Department of Treasury as of six months after the fiscal year-end. Despite significant accomplishments in 2016, the GLWA will need to request an extension of that filing requirement. Key drivers include the following.

"141.424 Annual financial report; contents; filing; extension; unauthorized investments prohibited; "pension" defined.

The chief administrative officer of a local unit may request an extension of the filing date from the state treasurer, and the state treasurer may grant the request for reasonable cause. If the local unit of government requests an extension of the filing deadline, then the local unit of government must provide to the department of treasury the unadjusted year end trial balance reports, in a form and manner as prescribed by the department of treasury, to the department of treasury at the time the local unit of government requests the extension. The department of treasury shall post these unadjusted year end trial reports on the department's internet website if the extension is granted."

Chief Administrative Officer is defined by the Statute as shown below in PA 2 of 1968 Section, 141.422b Definitions; B to D, Sec. 2b.

“(3) “Chief administrative officer” means any of the following: ....

(g) The official granted general administrative control of an authority or organization of government established by law that may expend funds of the authority or organization.”

Further guidance is provided by the *Audit Manual for Local Units of Government in Michigan*:

“The chief administrative officer of a local unit may request an extension of the filing date from the state treasurer. When an audit cannot be completed within 6 months after the end of the fiscal year, a written request must be made before the audit is actually delinquent. A request for the extension for filing of an audit must include a letter from the chief administrative officer indicating:

- that the audit is in progress (identify any component units);
- when the audit is expected to be completed;
- an explanation of the existence of extraordinary circumstances beyond the control of the local unit and the audit cannot be completed and filed timely (the reasonable cause).

Treasury will send a written response to all audit extension requests. The request for an extension will be denied absent the existence of an extraordinary circumstance beyond the control of the local unit.”

**Analysis:** Consistent with discussions at the Audit Committee and Board meetings, a request for extension to file GLWA’s FY 2017 audit report until April 30, 2018 was submitted. That extension request and the related approval letter are attached.

**Proposed Action:** Receive and file report.



OFFICE OF THE CHIEF EXECUTIVE OFFICER  
735 RANDOLPH, SUITE 1900  
DETROIT, MICHIGAN 48226  
WWW.GLWATER.ORG

February 28, 2018

Mr. Nick Khouri, Treasurer  
State of Michigan  
Department of Treasury  
P.O. Box 30716  
Lansing, MI 48909

Dear Treasurer Khouri:

Thank you for previously granting an extension for submission of the audit for the Great Lakes Water Authority's (GLWA) fiscal year ended June 30, 2017 financial report until February 28, 2018. As you may recall, this is the first full year of operations for GLWA. At this time, the financial report is largely complete. There are, however, some open items that the Great Lakes Water Authority and the City of Detroit Water and Sewerage Department (DWSD) are negotiating as a Memorandum of Understanding (MOU) related to the leases for the regional water and sewer systems. The outcome of the MOU process is likely to impact cash balances and liabilities on the books of the GLWA. For this reason, the GLWA Board, Audit Committee and management would prefer to work through these final issues with DWSD in March 2018 and issue the final FY 2017 financial report with any contingencies resolved by April 30, 2018. This will also allow the reports to reflect this subsequent event as we plan to enter the market in mid calendar year 2018 to optimize refunding opportunities. While the amounts in the MOU discussion are material, nothing under discussion is considered to be detrimental to the financial position of either GLWA or DWSD.

Given these circumstances, the GLWA respectfully requests an extension for the filing of the fiscal year ended June 30, 2017 audit until April 30, 2018.

The preliminary FY 2017 financial results are positive as reported to the Audit Committee on November 17, 2017. The current FY 2018 financial results are also positive. The FY 2018 2<sup>nd</sup> Quarter report presented to the Audit Committee on February 23, 2018 is attached.

Thank you, in advance, for your consideration of this request.

Very truly yours,

Sue F. McCormick  
Chief Executive Officer

cc: GLWA Audit Committee  
Nicolette Bateson, GLWA Chief Financial Officer/Treasurer  
Mark Kettner, Principal, Rehmann Robson  
Mark Tschirhart, Principal, Rehmann Robson





RICK SNYDER  
GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF TREASURY  
LANSING

NICK A. KHOURI  
STATE TREASURER

March 1, 2018

Sue F. McCormick  
Chief Executive Officer  
Great Lakes Water Authority  
735 Randolph Street, Suite 1900  
Detroit, Michigan 48226

RE: Extension request for Audit Report for the Great Lakes Water Authority, FYE June 30, 2017

Dear Ms. McCormick:

This is in response to the Authority's February 28, 2018 request for an extension to file the Authority's audit for fiscal year ending June 30, 2017. Due to the Authority's circumstances as conveyed in said letter, including open matters related to cash and liabilities which will be addressed by a Memorandum of Understanding under discussion with the City of Detroit Water & Sewerage Department (DWSD). Therefore, the Authority's audit along with the auditing procedures report will be due no later than April 30, 2018.

The Authority may submit a copy of the audit report, the auditing procedures report, and the comments and recommendations letter (if applicable) online by visiting [Michigan.gov/treasury](http://Michigan.gov/treasury) at Michigan Department of Treasury/online report.

If Authority staff have any questions, please contact Rod Taylor, Administrator of the Community Engagement and Finance Division at (517) 373-3227.

Sincerely,

A handwritten signature in blue ink, appearing to read "Eric Scorsone".

Eric Scorsone  
Deputy State Treasurer

cc: Edward Koryzno, Treasury



## Financial Services Audit Committee Communication

**Date:** March 16, 2018

**To:** Great Lakes Water Authority Audit Committee

**From:** Jon Wheatley, Public Finance Manager

**Re:** Water Residential Assistance Program Update and Proposed Program Assistance Allocation Changes

**Background:** The Water Residential Assistance Program (“WRAP”) provides sustainable funding for qualifying low-income residents served by the Great Lakes Water Authority’s (“GLWA”) customer communities. The program is funded by GLWA at an amount equal to 0.5 percent of budgeted revenues with the initial FY 2016 funding level of \$4.5 million combined for water and sewer services, \$4.7 million in FY 2017 and \$4.9 million for FY 2018.

The scope of funding uses includes a) payment assistance and b) water audit and water conservation measures. Eligible residential customers with a past due bill and/or who are in active shut off can receive assistance with paying down arrears and receive \$25 toward monthly bill payment assistance annually up to \$1,000. High volume water users can receive a one-time home audit and home water conservation services up to \$1,000. Maximum annual assistance per household is \$2,000. To participate in WRAP, an applicant must have household gross incomes at or below 150% of the federal poverty income thresholds. Customers with water usage at or above 120% of the average residential usage are eligible to participate in a water audit and install water conservation measures. WRAP participants are also encouraged to participate in both financial coaching and water conservation workshops as well as other support services. The program is administered by Wayne Metro Community Action Agency (Wayne Metro), a nonprofit agency.

The WRAP began providing assistance to customers of GLWA on March 1, 2016 and has the potential to serve over 100 communities within the GLWA service area. In order to assist qualified households each community must opt into the program and sign a Memorandum of Agreement (MOA) with Wayne Metro. To date, 72 communities have opted into WRAP, with 7 more communities with MOAs in progress. A list of current participating communities is presented in **Table 1**.

**Table 1- WRAP Participating Communities**

| <b>Wayne County</b>  | <b>Oakland County</b>    | <b>Macomb County</b>    |
|----------------------|--------------------------|-------------------------|
| Allen Park           | Beverly Hills            | Centerline              |
| Brownstown Township  | Bingham Farms            | Chesterfield Township   |
| Canton Township      | Birmingham               | Clinton Township        |
| Dearborn             | Clawson                  | Eastpointe              |
| Dearborn Heights     | Commerce Township        | Fraser                  |
| Detroit              | Farmington               | Macomb Township         |
| Ecorse               | Farmington Hills         | New Haven               |
| Flat Rock            | Ferndale                 | Shelby Township         |
| Garden City          | Hazel Park               | St. Clair Shores        |
| Gibraltar            | Huntington Woods         | Sterling Heights        |
| Grosse Pointe Shores | Keego Harbor             | Utica                   |
| Hamtramck            | Lathrup Village          | Warren                  |
| Harper Woods         | Madison Heights          | Washington Township     |
| Inkster              | Oak Park                 |                         |
| Lincoln Park         | Orchard Lake             | <b>Lapeer County</b>    |
| Livonia              | Orion Township           | Almont                  |
| Melvindale           | Oxford                   | Lapeer                  |
| Northville           | Pleasant Ridge           |                         |
| Plymouth             | Pontiac                  | <b>Washtenaw County</b> |
| Redford Township     | Royal Oak                | Pittsfield Township     |
| River Rouge          | Royal Oak Township       | Superior Township       |
| Romulus              | Southfield               | Ypsilanti               |
| Southgate            | Sylvan Lake              | Ypsilanti Township      |
| Taylor               | West Bloomfield Township |                         |
| Trenton              |                          |                         |
| Van Buren Township   | <b>Monroe County</b>     |                         |
| Wayne                | Ash Township             |                         |
| Westland             |                          |                         |

**WRAP Cashflow Update**

Through December 31, 2017, WRAP has committed almost \$4.9 million in assistance funds and over \$1.4 million in conservation and repair funds across the GLWA service area. Over 6,600 households have been assisted, avoiding over 4,100 shut-offs. Below are cashflow updates for WRAP through the end of FY 2017 and through the end of the most recent period, December 2017.

## **1. FY 2017 WRAP Cashflow**

**Table 2** shows the WRAP cashflow of budgeted and committed funds in total and for each of the participating counties and the City of Detroit as of June 30, 2017. In total for FY 2017, over \$2.2 million in assistance funds were committed and over \$570,000 of conservation and repair dollars were spent. From March 1, 2016 to June 30, 2017, over \$8.0 million was budgeted for WRAP and almost \$4.3 million was utilized by WRAP participants during that time. As of June 30, 2017, the suburban counties still had uncommitted funds (combined assistance and conservation) of over \$1.9 million through June 30, 2017. The City of Detroit had uncommitted funds of over \$1.8 million due to the reallocation of the uncommitted FY 2016 suburban assistance funds.

## **2. FY 2018 WRAP Cashflow as of February 28, 2018**

**Table 3** shows the WRAP cashflow of budgeted and committed funds in total and for each of the participating counties and the City of Detroit as of February 28, 2018. From March 1, 2016 to February 28, 2018, over \$12.3 million was budgeted for WRAP (including the FY 2018 allocation) and over \$6.6 million was utilized by WRAP participants during that time.

### **Proposed Change to Program Requirements**

In response to the feedback GLWA management has received from participating member communities, GLWA management is recommending changing the 2-year residential customer WRAP participation limit to a 3-year limitation. This will help eligible participants in WRAP to have the best chance at success by allowing an extra 12 months of bill assistance.

### **Wayne Metro Funding Recommendations**

Based on the demonstrated usage of the WRAP funds since March 1, 2016 and the usage during FY 2017, Wayne Metro is recommending reallocation of currently uncommitted FY 2017 suburban WRAP funds and a reallocation of budgeted WRAP funds for FY 2019. Attached is Wayne Metro's letter (including referenced documents) dated March 9, 2018 which outlines their recommendations. Below is a summary of the recommendations:

- 1. Reallocation of Uncommitted FY 2017 Assistance Funds:** Similar to the demonstrated WRAP utilization in FY 2016, suburban counties had uncommitted assistance dollars of \$1,034,435, as of June 30, 2017. Wayne Metro is requesting a reallocation of those funds to the City of Detroit in the amount of \$604,720 and \$383,515 (\$307,515 for assistance and \$76,000 for conservation) to the City of Flint.

The remaining \$46,200 will remain in the county allocations for third year WRAP assistance to eligible participants.

2. **Reallocation of Uncommitted FY 2016 and 2017 Conservation Funds:** In addition to the uncommitted assistance funds, the suburban counties have underutilized the conservation funds in both FY 2016 and FY 2017. Wayne Metro is recommending that the \$446,089 in uncommitted FY 2016 conservation dollars be reallocated to the City of Detroit and the uncommitted \$202,249 FY 2017 conservation dollars be designated for the replacement of fixtures in the home that pre-date the lead-free plumbing code change.
3. **Need-Based Allocation of FY 2019 WRAP Funds:** Although WRAP is still a relatively new program and new communities are continuing to join WRAP, the utilization of suburban funding allocations is below those of the City of Detroit. In 2017, the GLWA Board reallocated over \$1.6 million to the City of Detroit and \$117,000 to the City of Flint from uncommitted FY 2016 WRAP allocations. A similar request is being made for a reallocation of uncommitted FY 2017 suburban funds. In order to address this continued gap in demonstrated utilization, Wayne Metro is requesting an allocation for FY 2019 WRAP funds based on a need-based formula, similar to the Community Development Block Grant (CDBG) program. A table of proposed need-based allocations is attached.

**Budget Impact:** None

**Proposed Action:** The Audit Committee recommends that the Great Lakes Water Authority Board 1) approve the proposed program change to WRAP to allow participants to remain in the program for 3 years, subject to approval by the representing Director; and 2) consider the proposed Wayne Metro funding reallocation recommendations.

# Table 2

WRAP Fund Sources and Uses  
(Unaudited)

## TOTAL Activity March 1, 2016 to June 30, 2017

INCLUDES FY 2016 AND 2017 FUNDING  
INCLUDES REALLOCATION OF FY 2016 UNCOMMITTED FUNDS BASED ON APRIL 26, 2017 BOARD ACTION

| Row | Sources (Net Revenues)                                       | Detroit             | Out-Wayne<br>County | Oakland<br>County   | Macomb<br>County    | Washtenaw<br>County | St. Clair<br>County | Lapeer<br>County   | Monroe<br>County  | Genesee<br>County  | City of Flint     | Total               |
|-----|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|-------------------|--------------------|-------------------|---------------------|
| 1   | <b>FY 2016 Assistance Budget Allocation</b>                  |                     |                     |                     |                     |                     |                     |                    |                   |                    |                   |                     |
| 2   | Bill and Arrearage Assistance                                | \$ 1,238,736        | \$ 748,629          | \$ 740,155          | \$ 379,764          | \$ 35,419           | \$ 3,051            | \$ 10,080          | \$ 5,093          | \$ 63,842          | \$ -              | \$ 3,224,769        |
| 3   | Home Audit and Repairs                                       | 288,022             | 174,066             | 172,096             | 88,300              | 8,235               | 709                 | 2,344              | 1,184             | 14,500             | -                 | 749,457             |
| 4   | <b>Total FY 2016 Assistance Budget Allocation</b>            | <b>\$ 1,526,759</b> | <b>\$ 922,695</b>   | <b>\$ 912,250</b>   | <b>\$ 468,064</b>   | <b>\$ 43,654</b>    | <b>\$ 3,760</b>     | <b>\$ 12,424</b>   | <b>\$ 6,277</b>   | <b>\$ 78,342</b>   | <b>\$ -</b>       | <b>\$ 3,974,226</b> |
| 5   | <b>Re-Allocation of Uncommitted Funds from FY 2016 (1)</b>   |                     |                     |                     |                     |                     |                     |                    |                   |                    |                   |                     |
| 6   | Bill and Arrearage Assistance Reallocated to Detroit         | \$ 1,664,833        | \$ (718,353)        | \$ (591,163)        | \$ (355,316)        | \$ -                | \$ -                | \$ -               | \$ -              | \$ -               | \$ -              | \$ -                |
| 7   | Bill and Arrearage Assistance Reallocated to Flint           | -                   | -                   | -                   | -                   | (35,419)            | (3,051)             | (10,080)           | (5,093)           | (63,842)           | 117,485           | -                   |
| 8   | <b>Total Re-Allocation of Uncommitted Funds from FY 2016</b> | <b>\$ 1,664,833</b> | <b>\$ (718,353)</b> | <b>\$ (591,163)</b> | <b>\$ (355,316)</b> | <b>\$ (35,419)</b>  | <b>\$ (3,051)</b>   | <b>\$ (10,080)</b> | <b>\$ (5,093)</b> | <b>\$ (63,842)</b> | <b>\$ 117,485</b> | <b>\$ 0</b>         |
| 9   | <b>FY 2017 Assistance Budget Allocation</b>                  |                     |                     |                     |                     |                     |                     |                    |                   |                    |                   |                     |
| 10  | Bill and Arrearage Assistance                                | \$ 1,278,103        | \$ 806,833          | \$ 774,825          | \$ 400,804          | \$ 37,998           | \$ 2,431            | \$ 10,059          | \$ 5,561          | \$ -               | \$ -              | \$ 3,316,615        |
| 11  | Home Audit and Repairs                                       | 297,856             | 188,029             | 180,570             | 93,406              | 8,855               | 578                 | 2,344              | 1,296             | -                  | -                 | 772,934             |
| 12  | <b>Total FY 2017 Assistance Budget Allocation</b>            | <b>\$ 1,575,960</b> | <b>\$ 994,862</b>   | <b>\$ 955,395</b>   | <b>\$ 494,209</b>   | <b>\$ 46,853</b>    | <b>\$ 3,009</b>     | <b>\$ 12,403</b>   | <b>\$ 6,858</b>   | <b>\$ -</b>        | <b>\$ -</b>       | <b>\$ 4,089,549</b> |
| 13  | <b>NET FY 2016 and FY 2017 Assistance Available</b>          | <b>\$ 4,767,551</b> | <b>\$ 1,199,204</b> | <b>\$ 1,276,482</b> | <b>\$ 606,957</b>   | <b>\$ 55,089</b>    | <b>\$ 3,718</b>     | <b>\$ 14,747</b>   | <b>\$ 8,042</b>   | <b>\$ 14,500</b>   | <b>\$ 117,485</b> | <b>\$ 8,063,774</b> |
| 14  | <b>Uses 3/01/2016 to 6/30/2017</b>                           |                     |                     |                     |                     |                     |                     |                    |                   |                    |                   |                     |
| 15  | Investment Income  | \$ -                | \$ -                | \$ -                | \$ -                | \$ -                | \$ -                | \$ -               | \$ -              | \$ -               | \$ -              | \$ -                |
| 16  | Home Repairs   | 274,991             | 16,079              | 29,449              | 30,982              | -                   | -                   | -                  | -                 | -                  | -                 | 351,500             |
| 17  | Home Audits  | 345,075             | 25,175              | 33,725              | 38,000              | 475                 | -                   | -                  | -                 | -                  | -                 | 442,450             |
| 18  | Bill Assistance  | 126,228             | 10,627              | 19,717              | 15,832              | 575                 | -                   | -                  | -                 | -                  | -                 | 172,979             |
| 19  | Arrearage Assistance   | 499,758             | 31,887              | 38,496              | 11,834              | -                   | -                   | -                  | -                 | -                  | -                 | 581,975             |
| 20  | <b>Total Uses 3/01/2016 to 6/30/2017</b>                     | <b>\$ 1,246,052</b> | <b>\$ 83,768</b>    | <b>\$ 121,387</b>   | <b>\$ 96,648</b>    | <b>\$ 1,050</b>     | <b>\$ -</b>         | <b>\$ -</b>        | <b>\$ -</b>       | <b>\$ -</b>        | <b>\$ -</b>       | <b>\$ 1,548,904</b> |
| 21  | <b>Net Funds Available for Future Assistance</b>             | <b>\$ 3,521,500</b> | <b>\$ 1,115,436</b> | <b>\$ 1,155,095</b> | <b>\$ 510,310</b>   | <b>\$ 54,039</b>    | <b>\$ 3,718</b>     | <b>\$ 14,747</b>   | <b>\$ 8,042</b>   | <b>\$ 14,500</b>   | <b>\$ 117,485</b> | <b>\$ 6,514,870</b> |
| 22  | <b>Less: Committed Funds 3/01/2016 to 6/30/2017</b>          |                     |                     |                     |                     |                     |                     |                    |                   |                    |                   |                     |
| 23  | Bill Assistance  | \$ 704,460          | \$ 210,023          | \$ 224,035          | \$ 111,468          | \$ 5,125            | \$ -                | \$ -               | \$ -              | \$ -               | \$ -              | \$ 1,255,111        |
| 24  | Arrearage Assistance   | 1,155,016           | 129,973             | 374,357             | 24,638              | 3,897               | 0                   | 0                  | 0                 | 0                  | 0                 | 1,687,881           |
| 25  | Breakage   | (209,086)           | (16,947)            | 0                   | 0                   | 0                   | 0                   | 0                  | 0                 | 0                  | 0                 | (226,033)           |
| 26  | <b>Total Committed Funds 3/01/2016 to 6/30/2017</b>          | <b>\$ 1,650,389</b> | <b>\$ 323,049</b>   | <b>\$ 598,393</b>   | <b>\$ 136,107</b>   | <b>\$ 9,022</b>     | <b>\$ -</b>         | <b>\$ -</b>        | <b>\$ -</b>       | <b>\$ -</b>        | <b>\$ -</b>       | <b>\$ 2,716,959</b> |
| 27  | <b>Total Expenditures/Committed Funds</b>                    | <b>\$ 2,896,440</b> | <b>\$ 406,817</b>   | <b>\$ 719,780</b>   | <b>\$ 232,754</b>   | <b>\$ 10,072</b>    | <b>\$ -</b>         | <b>\$ -</b>        | <b>\$ -</b>       | <b>\$ -</b>        | <b>\$ -</b>       | <b>\$ 4,265,864</b> |
| 28  | <b>Uncommitted Funds as of 6/30/2017</b>                     | <b>\$ 1,871,111</b> | <b>\$ 792,387</b>   | <b>\$ 556,703</b>   | <b>\$ 374,203</b>   | <b>\$ 45,016</b>    | <b>\$ 3,718</b>     | <b>\$ 14,747</b>   | <b>\$ 8,042</b>   | <b>\$ 14,500</b>   | <b>\$ 117,485</b> | <b>\$ 3,797,911</b> |

(1) Based on April 26, 2017 Board of Directors action

REVISED 8.08.17

# Table 3

## WRAP Fund Sources and Uses (Unaudited)

### TOTAL Activity March 1, 2016 to February 28, 2018

INCLUDES FY 2016, 2017 & 2018 FUNDING

INCLUDES REALLOCATION OF FY 2016 UNCOMMITTED FUNDS BASED ON APRIL 26, 2017 BOARD ACTION

Row

|  | Detroit             | Out-Wayne           | Oakland             | Macomb              | Washtenaw          | St. Clair         | Lapeer             | Monroe            | Genesee            | City of Flint     | Total                |
|--|---------------------|---------------------|---------------------|---------------------|--------------------|-------------------|--------------------|-------------------|--------------------|-------------------|----------------------|
| <b>Sources (Net Revenues)</b>                                  |                     |                     |                     |                     |                    |                   |                    |                   |                    |                   |                      |
| <b>FY 2016 Assistance Budget Allocation</b>                    |                     |                     |                     |                     |                    |                   |                    |                   |                    |                   |                      |
| Bill and Arreage Assistance                                    | \$ 1,238,736        | \$ 748,629          | \$ 740,155          | \$ 379,764          | \$ 35,419          | \$ 3,051          | \$ 10,080          | \$ 5,093          | \$ 63,842          | \$ -              | \$ 3,224,769         |
| Home Audit and Repairs   | 288,022             | 174,066             | 172,096             | 88,300              | 8,235              | 709               | 2,344              | 1,184             | 14,500             | -                 | 749,457              |
| <b>Total FY 2016 Assistance Budget Allocation</b>              | <b>\$ 1,526,759</b> | <b>\$ 922,695</b>   | <b>\$ 912,250</b>   | <b>\$ 468,064</b>   | <b>\$ 43,654</b>   | <b>\$ 3,760</b>   | <b>\$ 12,424</b>   | <b>\$ 6,277</b>   | <b>\$ 78,342</b>   | <b>\$ -</b>       | <b>\$ 3,974,226</b>  |
| <b>Re-Allocation of Uncommitted Funds from FY 2016 (1)</b>     |                     |                     |                     |                     |                    |                   |                    |                   |                    |                   |                      |
| Bill and Arreage Assistance Reallocated to Detroit             | \$ 1,664,833        | \$ (718,353)        | \$ (591,163)        | \$ (355,316)        | \$ -               | \$ -              | \$ -               | \$ -              | \$ -               | \$ -              | \$ -                 |
| Bill and Arreage Assistance Reallocated to Flint               | -                   | -                   | -                   | -                   | (35,419)           | (3,051)           | (10,080)           | (5,093)           | (63,842)           | 117,485           | -                    |
| <b>Total Re-Allocation of Uncommitted Funds from FY 2016</b>   | <b>\$ 1,664,833</b> | <b>\$ (718,353)</b> | <b>\$ (591,163)</b> | <b>\$ (355,316)</b> | <b>\$ (35,419)</b> | <b>\$ (3,051)</b> | <b>\$ (10,080)</b> | <b>\$ (5,093)</b> | <b>\$ (63,842)</b> | <b>\$ 117,485</b> | <b>\$ 0</b>          |
| <b>FY 2017 Assistance Budget Allocation</b>                    |                     |                     |                     |                     |                    |                   |                    |                   |                    |                   |                      |
| Bill and Arreage Assistance                                    | \$ 1,278,103        | \$ 806,833          | \$ 774,825          | \$ 400,804          | \$ 37,998          | \$ 2,431          | \$ 10,059          | \$ 5,561          | \$ -               | \$ -              | \$ 3,316,615         |
| Home Audit and Repairs   | 297,856             | 188,029             | 180,570             | 93,406              | 8,855              | 578               | 2,344              | 1,296             | -                  | -                 | 772,934              |
| <b>Total FY 2017 Assistance Budget Allocation</b>              | <b>\$ 1,575,960</b> | <b>\$ 994,862</b>   | <b>\$ 955,395</b>   | <b>\$ 494,209</b>   | <b>\$ 46,853</b>   | <b>\$ 3,009</b>   | <b>\$ 12,403</b>   | <b>\$ 6,858</b>   | <b>\$ -</b>        | <b>\$ -</b>       | <b>\$ 4,089,549</b>  |
| <b>FY 2018 Assistance Budget Allocation</b>                    |                     |                     |                     |                     |                    |                   |                    |                   |                    |                   |                      |
| Bill and Arreage Assistance                                    | \$ 1,303,229        | \$ 848,677          | \$ 827,662          | \$ 429,388          | \$ 40,961          | \$ 2,604          | \$ 9,970           | \$ 5,908          | \$ 28,679          | \$ -              | \$ 3,497,078         |
| Home Audit and Repairs   | 303,712             | 197,780             | 192,883             | 100,067             | 9,546              | 607               | 2,323              | 1,377             | 6,684              | -                 | 814,979              |
| <b>Total FY 2018 Assistance Budget Allocation</b>              | <b>\$ 1,606,941</b> | <b>\$ 1,046,457</b> | <b>\$ 1,020,545</b> | <b>\$ 529,455</b>   | <b>\$ 50,507</b>   | <b>\$ 3,211</b>   | <b>\$ 12,294</b>   | <b>\$ 7,285</b>   | <b>\$ 35,363</b>   | <b>\$ -</b>       | <b>\$ 4,312,057</b>  |
| <b>NET FY 2016, FY 2017 &amp; FY 2018 Assistance Available</b> | <b>\$ 6,374,492</b> | <b>\$ 2,243,661</b> | <b>\$ 2,297,027</b> | <b>\$ 1,136,412</b> | <b>\$ 105,596</b>  | <b>\$ 6,929</b>   | <b>\$ 27,040</b>   | <b>\$ 15,327</b>  | <b>\$ 49,863</b>   | <b>\$ 117,485</b> | <b>\$ 12,375,831</b> |
| <b>Uses 3/01/2016 to 2/28/2018</b>                             |                     |                     |                     |                     |                    |                   |                    |                   |                    |                   |                      |
| Investment Income  | \$ -                | \$ -                | \$ -                | \$ -                | \$ -               | \$ -              | \$ -               | \$ -              | \$ -               | \$ -              | \$ -                 |
| Home Repairs   | 518,445             | 38,186              | 49,686              | 41,509              | -                  | -                 | -                  | -                 | -                  | -                 | 647,826              |
| Home Audits  | 639,825             | 66,975              | 75,525              | 59,375              | 475                | -                 | -                  | -                 | -                  | -                 | 842,175              |
| Bill Assistance  | 505,903             | 66,573              | 121,038             | 108,131             | 305                | -                 | -                  | -                 | -                  | -                 | 801,950              |
| Arreage Assistance   | 1,300,895           | 171,188             | 311,240             | 43,692              | 784                | -                 | -                  | -                 | -                  | -                 | 1,827,798            |
| <b>Total Uses 3/01/2016 to 2/28/2018</b>                       | <b>\$ 2,965,068</b> | <b>\$ 342,922</b>   | <b>\$ 557,488</b>   | <b>\$ 252,708</b>   | <b>\$ 1,564</b>    | <b>\$ -</b>       | <b>\$ -</b>        | <b>\$ -</b>       | <b>\$ -</b>        | <b>\$ -</b>       | <b>\$ 4,119,750</b>  |
| <b>Net Funds Available for Future Assistance</b>               | <b>\$ 3,409,424</b> | <b>\$ 1,902,738</b> | <b>\$ 1,739,539</b> | <b>\$ 883,704</b>   | <b>\$ 104,032</b>  | <b>\$ 6,929</b>   | <b>\$ 27,040</b>   | <b>\$ 15,327</b>  | <b>\$ 49,863</b>   | <b>\$ 117,485</b> | <b>\$ 8,256,081</b>  |
| <b>Less: Committed Funds 3/01/2016 to 2/28/2018</b>            |                     |                     |                     |                     |                    |                   |                    |                   |                    |                   |                      |
| Bill Assistance  | \$ 681,657          | \$ 315,425          | \$ 183,236          | \$ 62,527           | \$ 7,495           | \$ -              | \$ -               | \$ -              | \$ -               | \$ -              | \$ 1,250,341         |
| Arreage Assistance   | 865,661             | 93,052              | 257,780             | 35,748              | 4,086              | 0                 | 0                  | 0                 | 0                  | 0                 | 1,256,327            |
| Breakage   | 0                   | 0                   | 0                   | 0                   | 0                  | 0                 | 0                  | 0                 | 0                  | 0                 | 0                    |
| <b>Total Committed Funds 3/01/2016 to 2/28/2018</b>            | <b>\$ 1,547,318</b> | <b>\$ 408,477</b>   | <b>\$ 441,016</b>   | <b>\$ 98,275</b>    | <b>\$ 11,581</b>   | <b>\$ -</b>       | <b>\$ -</b>        | <b>\$ -</b>       | <b>\$ -</b>        | <b>\$ -</b>       | <b>\$ 2,506,668</b>  |
| <b>Total Expenditures/Committed Funds</b>                      | <b>\$ 4,512,386</b> | <b>\$ 751,399</b>   | <b>\$ 998,504</b>   | <b>\$ 350,984</b>   | <b>\$ 13,145</b>   | <b>\$ -</b>       | <b>\$ -</b>        | <b>\$ -</b>       | <b>\$ -</b>        | <b>\$ -</b>       | <b>\$ 6,626,418</b>  |
| <b>Uncommitted Funds as of 2/28/2018</b>                       | <b>\$ 1,862,106</b> | <b>\$ 1,494,261</b> | <b>\$ 1,298,523</b> | <b>\$ 785,429</b>   | <b>\$ 92,451</b>   | <b>\$ 6,929</b>   | <b>\$ 27,040</b>   | <b>\$ 15,327</b>  | <b>\$ 49,863</b>   | <b>\$ 117,485</b> | <b>\$ 5,749,414</b>  |

(1) Based on April 26, 2017 Board of Directors action



Wayne Metropolitan  
Community Action Agency  
Established 1971



LHSA  
A Community Action Agency



March 9, 2018

Great Lakes Water Authority & Chief Executive Officer  
500 Randolph, 19<sup>th</sup> Floor  
Detroit, MI 48202

**RE: Water Residential Assistance Program Reallocation of Uncommitted FY16-17 Funds**

Dear GLWA Board of Directors and Sue McCormick,

Community Action Agencies, America's anti-poverty network, carry out a shared promise to empower people and communities to be strong, healthy, and thriving. The Community Action Alliance for Southeast Michigan, through our role in WRAP, has made water assistance, conservation, and consumer education a leading priority in our community-based poverty fighting efforts.

Together we have enrolled more than 11,000 GLWA resident customers into WRAP assisting in the prevention of thousands of water service shut offs. With 68 of the eligible GLWA communities now offering WRAP services to residents and four additional MOAs in process the reach and impact of WRAP continues to grow. **Even with an increase in community participation, an unspent balance of \$446,089 in uncommitted funds remain in year one and \$1,236,684M in year two.**

The greatest need for WRAP services continues to be from City of Detroit customers. 70 percent of all WRAP enrollments are City of Detroit residents. All available GLWA Detroit WRAP funding has been committed to service first year enrollments, second year reenrollments, home repairs, and conservation measures.

**We respectfully request that GLWA Board of Directors:**

- 1. Approve a WRAP conservation and direct assistance funding reallocation as follows:**
  - a. Conservation:**
    - i. Reallocate Year 1 (\$446,089) to Detroit residential customers for conservation.**
    - ii. Reallocate Year 2 (\$202,249) to replace kitchen and bathroom faucets and program staffing supports.**
  - b. Direct Assistance:**
    - i. Reallocate year 2 unspent funds as follows:**
      - 1. All Counties: Year 3 re-enrollments: \$347,400 (bill credit only)**



2. Genesee County: New enrollments & Conservation: \$383,515
3. City of Detroit New Enrollments: \$305,520
2. Adjust future WRAP allocations to include a need-based formula. Example benchmark data scenarios are attached.

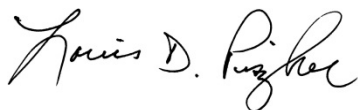
In advocating for this reallocation, it is worth noting:

- All allocated GLWA funding and additional funding raised for Detroit has been committed.
- This request is consistent with the reallocation request made by the CAA Alliance in 2017.
- An additional \$4,000,000 has been raised and committed for WRAP Detroit - Wayne Metro contributing \$1M in Federal dollars and DWSD an additional \$3M for Departmental sources.
- \$1.6M has been leveraged to expand and advance WRAP services through technology, facilities, and increased staffing.
- \$300,000 of discretionary funding has been raised through events, grants, and donations to provide one-time assistance to individuals and communities ineligible for WRAP.
- Introductory meetings have been conducted with GCARD, the Community Action Agency serving Flint in anticipation of providing WRAP services to Flint residents.

Please find attached:

1. A funding allocation request table
2. A yearly WRAP enrollment and community opt-in report
3. Benchmark data to inform a need-based allocation formula for WRAP
4. WRAP success story, Mr. Denzel Donald, a Detroit resident. Denzel's monthly bill went from \$300 a month to \$50 after a broken pipe was repaired. Denzel is also doing well in his new role as a Wayne Metro 2018 Certified Tax Specialist assisting other Detroit residents with free tax preparation services and financial education.

Sincerely,



Louis D. Piszker, CEO  
Wayne Metro CAA



Susan Harding, CEO  
Oakland Livingston Community Services



Ernest Cawvey, Executive Director  
Macomb Community Action Program



Stephanie Kasperzak, CEO  
Monroe Community Opportunity Program

**Wayne Metro Proposed Reallocation  
FY 2017 Uncommitted Assistance Funds**

|                         | <b>Year 3 Re-<br/>Enrollments</b> | <b>New<br/>Enrollments</b> | <b>Conservation</b> | <b>New<br/>Enrollments</b> | <b>Totals</b>          |
|-------------------------|-----------------------------------|----------------------------|---------------------|----------------------------|------------------------|
| <b>City of Detroit</b>  | 301,200                           |                            |                     | \$ 303,520 ** \$           | 604,720                |
| <b>Out-Wayne County</b> | 17,400                            |                            |                     |                            | 17,400                 |
| <b>Oakland County</b>   | 25,800                            |                            |                     |                            | 25,800                 |
| <b>Macomb County</b>    | 2,400                             |                            |                     |                            | 2,400                  |
| <b>Genesee County</b>   | -                                 |                            |                     |                            | -                      |
| <b>Washtenaw County</b> | 600                               |                            |                     |                            | 600                    |
| <b>Lapeer County</b>    | -                                 |                            |                     |                            | -                      |
| <b>Monroe County</b>    | -                                 |                            |                     |                            | -                      |
| <b>St. Clair County</b> | -                                 |                            |                     |                            | -                      |
| <b>Genesee County</b>   | -                                 | 307,515 **                 | 76,000              |                            | 383,515                |
| <b>Total</b>            | <b>\$ 347,400.00 *</b>            | <b>\$ 307,515.00</b>       | <b>\$ 76,000.00</b> | <b>\$ 303,520</b>          | <b>\$ 1,034,435.00</b> |

\* Bill-payment assistance only (NO ARREARS)

\*\* Bill-payment assistance and arrears

**Wayne Metro Proposed Reallocation  
FY 2017 Uncommitted Conservation Funds**

|                  | March 1, 2016 - June 30, 2016 |                                |                      | July 1, 2016 - June 30, 2017 |                                |                      |
|------------------|-------------------------------|--------------------------------|----------------------|------------------------------|--------------------------------|----------------------|
|                  | Home<br>Conservation          | Spent Dollars as<br>of 12.1.17 | Remaining<br>Balance | Home<br>Conservation         | Spent Dollars as<br>of 12.1.17 | Remaining<br>Balance |
| City of Detroit  | \$ 288,022                    | \$ 288,022                     | \$ -                 | \$ 297,856                   | \$ 297,856                     | \$ -                 |
| Out-Wayne County | 174,066                       | 475                            | 173,591              | 188,029                      | 93,888                         | 94,141               |
| Oakland County   | 172,096                       | 9,260                          | 162,836              | 180,570                      | 93,985                         | 86,585               |
| Macomb County    | 88,300                        | 5,610                          | 82,690               | 93,406                       | 84,481                         | 8,925                |
| Genesee County   | 14,500                        | -                              | 14,500               | -                            | -                              | -                    |
| Washtenaw County | 8,235                         | -                              | 8,235                | 8,855                        | 475                            | 8,380                |
| Lapeer County    | 2,344                         | -                              | 2,344                | 2,344                        | -                              | 2,344                |
| Monroe County    | 1,184                         | -                              | 1,184                | 1,296                        | -                              | 1,296                |
| St. Clair County | 709                           | -                              | 709                  | 578                          | -                              | 578                  |
| City of Flint    | -                             | -                              | -                    | -                            | -                              | -                    |
| <b>Total</b>     | <b>\$ 749,456</b>             | <b>\$ 303,367</b>              | <b>\$ 446,089</b>    | <b>* \$ 772,934</b>          | <b>\$ 570,685</b>              | <b>\$ 202,249 **</b> |

\* To be allocated to Detroit conservation.

\*\* To be allocated to Faucet Replacements & Program Staffing

**BENCHMARK DATA FOR WRAP NEED-BASED FORMULA:**

| County    | CDBG 2016 Allocation | % of Total | Pro-rata Share (Based on CDBG Allocation) | Difference   | Current WRAP Allocation |     | CSBG 2017 Allocation | % of Total | Pro-rata Share (Based on CSBG Allocation) | Difference  |
|-----------|----------------------|------------|---|--------------|-------------------------|-----|----------------------|------------|---|-------------|
| Detroit   | \$ 31,372,385        | 49%        | \$ 2,134,037                              | \$ 527,096   | \$ 1,606,941            | 37% | \$ 5,878,878         | 45%        | \$ 1,933,375                              | \$ 326,434  |
| Out Wayne | \$ 11,200,210        | 18%        | \$ 761,940                                | \$ (284,517) | \$ 1,046,457            | 24% | \$ 1,833,463         | 14%        | \$ 602,967                                | (\$443,490) |
| Oakland   | \$ 7,257,108         | 11%        | \$ 493,731                                | \$ (526,814) | \$ 1,020,545            | 24% | \$ 1,580,406         | 12%        | \$ 519,745                                | (\$500,800) |
| Genesee   | \$ 5,331,596         | 8%         | \$ 362,644                                | \$ 327,281   | \$ 35,363               | 1%  | \$ 1,159,466         | 9%         | \$ 381,311                                | \$345,948   |
| Washtenaw | \$ 1,858,189         | 3%         | \$ 126,343                                | \$ 75,836    | \$ 50,507               | 1%  | \$ 575,083           | 4%         | \$ 189,126                                | \$138,619   |
| Macomb    | \$ 5,250,248         | 8%         | \$ 357,038                                | \$ (172,417) | \$ 529,455              | 12% | \$ 1,144,134         | 9%         | \$ 376,269                                | (\$153,186) |
| St. Clair | \$ 708,717           | 1%         | \$ 48,295                                 | \$ 45,084    | \$ 3,211                | 0%  | \$ 290,557           | 2%         | \$ 95,555                                 | \$92,344    |
| Lapeer    | \$ -                 | 0%         | \$ -                                      | \$ (12,293)  | \$ 12,293               | 0%  | \$ 435,146           | 3%         | \$ 143,106                                | \$130,813   |
| Monroe    | \$ 411,759           | 1%         | \$ 28,028                                 | \$ 20,743    | \$ 7,285                | 0%  | \$ 214,684           | 2%         | \$ 70,603                                 | \$63,318    |
| Total:    | \$ 63,390,212        | 100%       | \$4,312,057                               |              | \$4,312,057             |     | \$13,111,817         | 100%       | \$4,312,057                               |             |

**CDBG (Community Development Block Grant)** is one of the longest-running programs of the U.S. Department of Housing and Urban Development, funds local community development activities such as affordable housing, anti-poverty programs, and infrastructure development. CDBG eligibility is generally calculated at 80% of Area Median Income (AMI). **CSBG (Community Services Block Grant)** is a federal, anti-poverty block grant which funds the operations of a state-administered network of local agencies. This CSBG network consists of more than 1,000 agencies that create, coordinate and deliver programs and services to low-income Americans at 125% of the Federal Poverty Line (FPL). CSBG is administered in 99 percent of the nation's counties.



## Denzel Donald

### Basic Needs

**Denzel Donald** is a proud and spirited Detroit'er who has accomplished a great deal in his young age of 25. A passionate and talented Opera singer, he has traveled to Panama, Africa and Italy to perform for audiences around the world. He writes his own music and studied at Wayne State University's School of Music.

When Denzel inherited a home on Detroit's northside from a family member, he quickly found out how much work can be required to turn a house into a home. While the bones of the house were solid, the house had significant issues affecting Denzel's budget each month.



\$7.3

Million provided in water and home energy supports



\$500,000

Granted to support Detroit partners



1,067

Served through case management

Denzel first came to Wayne Metro when his water bill climbed to more than \$2,400 when a pipe burst. He braved the elements to attend a water assistance fair at a DWSD service center and was disheartened when he saw the long line of people wrapped around the building. He chose to wait, and hope, and see if he was eligible for assistance and is glad he did because he was enrolled that day in the Water Residential Assistance Program (WRAP). The WRAP program gave Denzel the lift he needed to get help with monthly bill payment, paying down past due arrears and making home repairs.

Denzel says he found the WRAP program water audit one of the most valuable parts of the program. He was impressed with the team who gave him ideas and strategies for simple fixes that made a big impact like changing out faucets and replacing shower heads with water efficient ones. WRAP also paid to fix the broken pipe. Denzel is now a mindful, committed conservator of water. He is able to perform basic upgrades in his home and tells us that through WRAP, his monthly bill has decreased from \$300 a month to a manageable \$30 a month.

Denzel says, "The program and people at Wayne Metro are a financial and educational blessing. They truly care about the people they help."

"I am empowered to be a smart homeowner, and to help others find their way to this program."

- Denzel Donald, Detroit Resident



## Financial Services Audit Committee Communication

**Date:** June 16, 2017

**To:** Great Lakes Water Authority Audit Committee

**From:** Jon Wheatley, Public Finance Manager

**Re:** Request for Public Hearing: Drinking Water Revolving Fund (DWRf) Project Plan Submittals for the Lake Huron Water Treatment Plant Sludge System Improvements Project and the Waterworks Park to Northeast Transmission Main Project

**Background:** The Great Lakes Water Authority (the “GLWA”) has identified two water system projects in the proposed FY 2019 to FY 2023 Capital Improvement Plan (CIP) for submittal to the Michigan Department of Environmental Quality (MDEQ) for the Drinking Water Revolving Fund (DWRf) financing program for funding in the state’s 2019 fiscal year. The deadline for submitting all DWRf project plans to MDEQ is May 1, 2018. Prior to submitting the project plans, GLWA must hold a public hearing for each project and present the plans. The public hearing for both projects has been set for April 11, 2018 at 1:00 p.m.

The FY 2019 DWRf Project Plans and public hearing notices for the Lake Huron Water Treatment Plant Sludge System Improvements Project and the Waterworks Park to Northeast Transmission Main Project have been posted on the GLWA website and can be found at: <http://www.glwater.org/category/news/hearing-notices>. These project plans will be presented at the public hearings. After the public hearings are closed, the included draft resolutions will be scheduled for action by the GLWA Board of Directors at its regularly scheduled meeting also on April 11, 2018. The resolutions must be approved and signed to ensure that the finalized Project Plans are assembled, printed, and submitted to the MDEQ by the deadline of May 1, 2018.

**Analysis:** Below is a description of the two projects.

**Lake Huron Water Treatment Plant Sludge System Improvements – (CIP# 111007):**

This project is comprised of the evaluation, design, and construction of the Raw Sludge Clarifiers and Raw Sludge Pumping Systems at the Lake Huron Water Treatment Plant (LHWTP). Constructed in 1976, the LHWTP is a Type I public water system that supplies water to residential, commercial, and industrial customers in GLWA’s Northern communities. The LHWTP uses source water drawn from a single intake located in Lake Huron. There are significant operational matters associated with the sludge handling system at the LHWTP as it relates to the twice annual cleaning of the settling basins. This

project is necessary to ensure that GLWA can maintain treatment of flows at the LHWTP without system failure.

The proposed project will provide construction of a new redundant wash water retention basin and a new sludge pumping station with the existing clarifiers being abandoned or demolished. Additionally, provisions for decanting clear water from Lagoon 5 and Lagoon 6 to Lagoon 8 so Lagoon 8 can serve as temporary overflow storage during basin cleanout are included within the scope of this project. These improvements and modifications are detailed in the Project Plan. The estimated cost of the project is \$7,250,000.

**Water Conveyance System – Waterworks Park to Northeast Transmission Main Project- (CIP# 122003):** The primary purpose of the project is to better align the GLWA water production capacity with long-term system water demands, while improving reliability, water quality protection and reducing future operational and maintenance costs as well as capital improvement costs.

The intent of the project is to provide finished water to the NE site from WWP through a proposed transmission pipeline such that treatment facilities at the NE site can be de-commissioned and the existing NE high lift station and reservoirs can be used to re-pump finished water to the NE service area. The proposed NE Repurposing will largely eliminate the need to complete the large and costly backlog of capital improvement projects at the NE site with the goal of long term capital cost savings. In addition to NE repurposing, the project is also intended to provide additional reliability to the WWP service area through the proposed transmission pipeline in case of loss of service at the WWP. The project is comprised of the final design and construction of a new transmission main, isolation valves, control valves, and related appurtenances to provide a design flow rate of 160 million gallons per day (MGD) of finished drinking water from Waterworks Park WTP to the Northeast facility. These improvements and modifications are detailed in the Project Plan. The estimated cost of this project is \$133,700,000.

**Justification:** GLWA is seeking low interest loan assistance through the DWRP program for both projects. Although the Michigan Department of Environmental Quality (MDEQ) interest rate for FY 2019 will not be determined until October 2018, the current year's interest rate of 2.00% is less than the present conventional revenue bond interest rates. Based on the combined project amounts of \$140.9 million, GLWA could save an estimated \$92 million in interest costs and avoided issuance costs, based on a similar open market revenue bond with a 30-year term and 5.00% interest rate, over the life of the 30-year bond issue. This will afford savings to both GLWA and its members.

**Budget Impact:** Debt service is anticipated to begin in FY 2020 for both projects and will be included as part of the FY 2020 financial plan.

**Proposed Action:** The Audit Committee recommends that the Great Lakes Water Authority Board hold the public hearings on April 11, 2018 for the project and approve the resolution to accept and submit the DWRP Project Plans for the Lake Huron Water Treatment Plant Sludge System Improvements Project and the Waterworks Park to Northeast Transmission Main Project as presented, at its regular meeting on April 11, 2018.

## **GREAT LAKES WATER AUTHORITY**

### **PUBLIC HEARING NOTICE LAKE HURON WATER TREATMENT PLANT SLUDGE SYSTEM IMPROVEMENTS FY 2019 DRINKING WATER REVOLVING FUND PROJECTS**

The Great Lakes Water Authority (GLWA) announces a Public Hearing regarding its Project Plan for the proposed Raw Sludge Clarifiers and Raw Sludge Pumping Systems Improvements Project. GLWA will be seeking low interest Drinking Water Revolving Fund (DWRP) loan assistance for FY 2019. The project is comprised of the evaluation, design, and construction of the Raw Sludge Clarifiers and Raw Sludge Pumping Systems at the Lake Huron Water Treatment Plant (LHWTP). Constructed in 1976, the LHWTP is a Type I public water system that supplies water to residential, commercial, and industrial customers in GLWA's Northern communities. The LHWTP uses source water drawn from a single intake located in Lake Huron. There are major issues associated with the sludge handling system at the LHWTP as it relates to the twice annual cleaning of the settling basins. This project is necessary to ensure that GLWA can maintain treatment of flows at the LHWTP without system failure. The proposed project will provide construction of a new redundant wash water retention basin and a new sludge pumping station with the existing clarifiers being abandoned or demolished. Additionally, provisions for decanting clear water from Lagoon 5 and Lagoon 6 to Lagoon 8 so Lagoon 8 can serve as temporary overflow storage during basin cleanout are included within the scope of this project. The total cost of this project is currently estimated at \$7,241,000 which will be allocated to GLWA and suburban customers similar to other LHWTP capital improvements. The Raw Sludge Clarifiers and Raw Sludge Pumping Systems Improvements Project is eligible for participation under the State of Michigan low interest DWRP loan program.

The Public Hearing will present a description of the recommended project, its evaluation, and estimated costs, as well as the cost per household impact for customer communities. The purpose of the hearing is not only to inform, but to seek and gather input from people that will be affected. Comments and viewpoints from the public are requested.

#### **THE MEETING WILL BE HELD ON:**

**DATE:** Wednesday, April 11, 2018

**PLACE:** Great Lake Water Authority  
Water Board Building  
735 Randolph  
5<sup>th</sup> Floor, Board Room  
Detroit, Michigan 48226

**TIME:** 1:00 p.m.

Information on the project Plan will be available for review after March 7, 2018 at the following locations:

**GLWA Website:** [www.glwater.org](http://www.glwater.org)

**Or**

**Great Lakes Water Authority  
Water Board Building  
735 Randolph, Room 1601, 16<sup>th</sup> Floor  
Detroit, MI 48226**

If you have questions or would like to submit written statements for the Public Hearing Record call or write:

**Jonathan Wheatley, Public Finance Manager  
Great Lakes Water Authority  
Water Board Building  
735 Randolph, Room 1601, 16<sup>th</sup> Floor  
Detroit, MI 48226  
(313) 224-4771**

Written comments will be accepted at the above address if received prior to 5:00 p.m. EST, Wednesday, April 11, 2018.

**Great Lakes Water Authority  
Sue F. McCormick  
Chief Executive Officer**



Great Lakes Water Authority  
Resolution

RE: Resolution for the Lake Huron Water Treatment Plant Sludge System Improvements  
FY 2019 Drinking Water Revolving Fund (DWRf) Project Plan

- Whereas The Lake Huron Water Treatment Plant Sludge System Improvements DWRf Project Plan for the FY 2019 DWRf has been prepared by the GLWA;
- Whereas The Lake Huron Water Treatment Plant is a Type I public water system that supplies water to residential, commercial, and industrial customers in GLWA's Northern communities;
- Whereas The proposed project is necessary to ensure that GLWA can maintain treatment of flows at the Lake Huron Water Treatment Plant without system failure;
- Whereas The capital improvement will provide construction of a new redundant wash water retention basin and a new sludge pumping station with the existing clarifiers being abandoned or demolished with provisions for decanting clear water from Lagoon 5 and 6 to Lagoon 8 so Lagoon 8 can serve as temporary overflow storage during cleanout;
- Whereas The FY 2019 DWRf Project Plan has been placed on public notice and a Public Hearing was held on April 11, 2018 at 1:00 p.m. where comments on the recommended project were solicited;
- Whereas It is the desire of the GLWA Board of Directors to secure low interest loan assistance through the DWRf program; and
- Whereas Formal action by the GLWA Board of Directors is needed to adopt the recommended FY 2019 DWRf Project Plan for the Lake Huron Water Treatment Plant Sludge System Improvements, as a requirement for participation in the State of Michigan's DWRf program.

Now, Therefore Be It:

- Resolved That this Board hereby accepts the FY 2019 Lake Huron Water Treatment Plant Sludge System Improvements project, dated April 2018, and directs staff members of the GLWA to address all public comments, prepare the responsiveness summary, and public the final Project Plan; and Be It Further
- Resolved That the Chief executive Officer (CEO) is authorized to transmit the final FY 2019 DWRf Project Plan for the Lake Huron Water Treatment Plant Sludge System Improvements project to the Michigan Department of Environmental Quality on behalf of the GLWA Board of Directors and take all appropriate steps to secure approval of a low interest loan in accordance with the State of

Michigan's DWRF procedures so that the project can proceed expeditiously to construction.

# **GREAT LAKES WATER AUTHORITY**

## **PUBLIC HEARING NOTICE WATER CONVEYANCE SYSTEM FY 2019 DRINKING WATER REVOLVING FUND (DWRP) PROJECTS**

The Great Lakes Water Authority (GLWA) announces a Public Hearing regarding its Project Plan for the proposed Waterworks Park to Northeast Transmission Main Project. GLWA will be seeking low interest Drinking Water Revolving Fund (DWRP) loan assistance for FY 2019. The primary purpose of the project is to better align the GLWA water production capacity with long-term system water demands, while improving reliability, water quality protection and reducing future operational and maintenance costs as well as capital improvement costs. The Northeast Water Treatment Plant (NE) was built in 1956 and has large backlog of required capital improvements necessary to maintain water treatment capacity. Waterworks Park Water Treatment Plant (WWP) was completely re-built in 2003 and has a large amount of excess treatment capacity. The intent of the project is to provide finished water to the NE site from WWP through a proposed transmission pipeline such that treatment facilities at the NE site can be de-commissioned and the existing NE high lift station and reservoirs can be used to re-pump finished water to the NE service area. The proposed NE Repurposing will largely eliminate the need to complete the large and costly backlog of capital improvement projects at the NE site with the goal of long term capital cost savings. In addition to NE repurposing, the project is also intended to provide additional reliability to the WWP service area through the proposed transmission pipeline in case of loss of service at the WWP. The project is comprised of the final design and construction of a new transmission main, isolation valves, control valves, and related appurtenances to provide a design flow rate of 160 million gallons per day (MGD) of finished drinking water from Waterworks Park WTP to the Northeast facility. The total cost of this project is currently estimated at \$133,700,000 that will be allocated to GLWA and suburban customers similar to other water system capital improvements. The Waterworks Park to Northeast Transmission Main Project is eligible for participation under the State of Michigan low interest DWRP loan program.

The Public Hearing will present a description of the recommended project, its evaluation, estimated costs and cost per household impact for customer communities. The purpose of the hearing is not only to inform, but to seek and gather input from people that will be affected. Comments and viewpoints from the public are requested.

### **THE MEETING WILL BE HELD ON:**

**DATE:** Wednesday, April 11, 2018

**PLACE:** Great Lakes Water Authority  
Water Board Building  
735 Randolph  
5<sup>th</sup> Floor, Board Room  
Detroit, Michigan 48226

**TIME:** 1:00 p.m.

Information on the Project Plan will be available for review after March 9, 2018 at the following locations:

**GLWA Website:** [www.glwater.org](http://www.glwater.org)  
or  
**Great Lakes Water Authority**  
**Water Board Building**  
**735 Randolph, Room 1601, 16<sup>th</sup> Floor**  
**Detroit, Michigan 48226**

If you have questions or would like to submit written statements for the Public Hearing Record call or write:

**Jonathan Wheatley, Public Finance Manager**  
**Great Lakes Water Authority**  
**735 Randolph, Room 1601, 16<sup>th</sup> Floor**  
**Detroit, Michigan 48226**  
**(313) 224-4771**

Written comments will be accepted at the above address if received prior to 5:00 p.m. EST, Wednesday, April 11, 2018.

**Great Lakes Water Authority**  
**Sue F. McCormick**  
**Chief Executive Officer**

Great Lakes Water Authority  
Resolution

RE: Resolution for the Water Conveyance System – Waterworks Park to Northeast Transmission Main  
FY 2019 Drinking water Revolving Fund (DWRF) Project Plan

- Whereas The Water Conveyance System – Waterworks Park to Northeast Transmission Main DWRF Project Plan for the FY 2019 DWRF has been prepared by the GLWA;
- Whereas The Northeast Water Treatment Plant (NE) was built in 1956 and has large backlog of required capital improvements necessary to maintain water treatment capacity. Waterworks Park Water Treatment Plant (WWP) was completely re-built in 2003 and has a large amount of excess treatment capacity;
- Whereas The proposed project is necessary to better align the GLWA water production capacity with long-term system water demands, while improving reliability, water quality protection and reducing future operational and maintenance costs as well as capital improvement costs;
- Whereas The capital improvement will provide finished water to the NE site from WWP through a proposed transmission pipeline such that treatment facilities at the NE site can be de-commissioned and the existing NE high lift station and reservoirs can be used to re-pump finished water to the NE service area. The proposed NE Repurposing will largely eliminate the need to complete the large and costly backlog of capital improvement projects at the NE site with the goal of long term capital cost savings. In addition to NE repurposing, the project is also intended to provide additional reliability to the WWP service area through the proposed transmission pipeline in case of loss of service at the WWP;
- Whereas The FY 2019 DWRF Project Plan has been placed on public notice and a Public Hearing was held on April 11, 2018 at 1:00 p.m. where comments on the recommended project were solicited;
- Whereas It is the desire of the GLWA Board of Directors to secure low interest loan assistance through the DWRF program; and
- Whereas Formal action by the GLWA Board of Directors is needed to adopt the recommended FY 2019 DWRF Project Plan Water Conveyance System – Waterworks Park to Northeast Transmission Main, as a requirement for participation in the State of Michigan’s DWRF program.

Now, Therefore Be It:

Resolved That this Board hereby accepts the FY 2019 Water Conveyance System – Waterworks Park to Northeast Transmission Main project, dated April 2018, and directs staff members of the GLWA to address all public comments, prepare the responsiveness summary, and public the final Project Plan; and Be It Further

Resolved That the Chief executive Officer (CEO) is authorized to transmit the final FY 2019 DWRF Project Plan for the Water Conveyance System – Waterworks Park to Northeast Transmission Main project to the Michigan Department of Environmental Quality on behalf of the GLWA Board of Directors and take all appropriate steps to secure approval of a low interest loan in accordance with the State of Michigan’s DWRF procedures so that the project can proceed expeditiously to construction.

**tFg**  
**THE FOSTER GROUP**

P.O. BOX 26282  
 LEAWOOD, KS 66225  
 TEL: (913) 345-1410  
 FAX: (913) 345-1640

**THE FOSTER GROUP, LLC**  
 BART FOSTER, PRESIDENT  
 CELL: (913) 530-6240  
 BFOSTER@FOSTERGROUPLLC.COM

## MEMORANDUM

GLWA Sewer “Charge Stability Adjustment”

March 13, 2018

To: Nicolette Bateson

From: Bart Foster

You have asked for commentary and observations regarding the potential implementation of a “Charge Stability Adjustment” for certain aspects of GLWA’s Sewer service charge schedule. This concept was originally introduced in presentation to the GLWA Board at its February 2018 workshop. We’ve prepared some sample hypothetical implementation scenarios to illustrate how it might work.

To review, in the GLWA sewer cost of service methodology, the vast majority of annual revenue requirements are allocated to Customers based on their relative SHARE of the costs allocated to the “common to all” (CTA) Cost Pool. There are two major “Customer specific” Cost Pools that are solely or primarily allocated to specific Customers:

- Oakland Macomb Interceptor (OMID) – directly allocable to OMID; and
- Combined Sewer Overflow (CSO) – of which 83% is allocable to the Detroit Customer Class.

The nature of these two Customer specific Cost Pools are similar, and methods for assigning indirect costs to both are under review as part of the Cost Allocation Project<sup>1</sup>. However there are unique circumstances for these two Cost Pools:

- The OMID Cost Pool is related to facilities that entirely serve one GLWA Customer, and could arguably be defined as “local” facilities for that Customer;
- The CSO Cost Pool is related to regional facilities that (while predominantly allocated to service for one Customer) are still a “common to all” wholesale service.

Both of the “Customer specific” Cost Pools are experiencing “unique” circumstances with respect to the FY 2019 Cost of Service Study, that have the effect of increasing costs allocated to them. The increases reflect a combination of refined budgetary awareness, new maintenance programs, and the recognition of new information from the capital asset inventory and valuation project. The increased allocation of costs to the OMID Cost Pool has the effect of increasing the OMID Wholesale Service Charge by approximately 2%, which is net of an offsetting reduction in costs allocable to the CTA Cost Pool. The increased

<sup>1</sup> For instance, the methods of assigning Centralized Services operating expenses, etc.

allocation of costs to the CSO Cost Pool has the effect of increasing the total Detroit allocated wholesale sewer revenue requirement by approximately 3.5%, which is also net of an offsetting reduction in costs allocable to the CTA Cost Pool.

The ***Charge Stability Adjustment*** concept seeks to stabilize potential variances in these two Customer specific Cost Pools, and the resulting possible irregular impacts in charges to specific Customers. It embraces a notion of comparing actual Cost Pool expenditures to budgeted amounts, and making adjustments to future charges to reflect actual cost activity. Under this approach, Sewer Service Charges would be established at 100% of the BUDGET assigned to the Customer specific (OMID / CSO) Cost Pools, with the understanding that:

- Actual costs to these Cost Pools would be tracked and compared to original budgets;
- Potentially, adjustments to future charges (for FY 2020 and/or beyond) would be made to reflect actual vs. budget performance in “Customer specific” Cost Pools.

This “Charge Stability Adjustment” concept is consistent with the overall equity and stability strategy that is fundamental to the GLWA Strategic Charge Initiatives. The concept may provide a valuable tool for GLWA to address potentially volatile expenditures in these unique Cost Pools, and avoid unintended consequences to the directly impacted Customers. ***This approach is NOT being considered for budget/actual variances in revenues or “CTA SHARES” revenue requirements.***

The concept is demonstrated in the accompanying exhibits to this memorandum for two separate scenarios. The first example Exhibit Page 1

Lines 1 through 8 illustrate the allocation of the FY 2019 budgeted revenue requirements to cost pools, and the use of the SHARES concept to allocate cost of service to Customers. For purposes of this discussion we’ve grouped Customers into (1) OMID; (2) All Other Suburban Wholesale; and (3) Detroit Customer Class. The amounts shown in Column 5 for Lines 5 through 7 represent the proposed FY 2019 annual sewer service charges for each of these Customer groupings.

Now let’s introduce how reviewing actual costs incurred could be considered under the concept under review. On Exhibit Page 1, Scenario 1 assumes varying levels of actual cost savings compared to budget for each Cost Pool. The SHARES concept can be used to allocate of the resulting actual costs of service to Customers (Lines 11 through 14) and compared to the originally allocated budgeted revenue requirements, as summarized by the variances on Lines 16 through 19. Under the ***Charge Stability Adjustment*** concept any actual to budget variances in the “regular” Cost Pools shown in Columns 1 and 2 would not result in charge modifications, but rather would impact GLWA reserve balances. However, the variances in the Customer specific Cost Pools would potentially modify future charges.

Now let’s illustrate how this might work in subsequent charges. For purposes of discussion, we’ll assume that the FY 2020 budget reflects a 4% increase uniformly for all Cost Pools. The budget increase for each Cost Pool is shown on Line 24. The ***Charge Stability***

*Adjustments* computed earlier on Line 21 are carried down to Line 25 before computing charges. In this example the net impact on the OMID and CSO Cost Pools is actually a 6% reduction compared to the original FY 2019 Charges. The reduction to the OMID Cost Pool accrues directly to OMID, and the decrease in the CSO Cost Pool is shared by all Customers, although principally to the Detroit Customer Class. As shown in Column 5 on Lines 31 through 34, this results in FY 2020 “charge increases” that are slightly *lower* for OMID and the Detroit Customer Class than for All Other Suburban Wholesale Customers. It also results in “charge increase” that is *lower* than the budget increase, since charges are being set to reflect activity from a prior budget year.

A second scenario is presented on Exhibit Page 2. The analysis is identical, except that in this instance we’ve assumed that actual costs exceed budgeted levels by varying amounts. (*See Line 9.*) The results can be traced through the rest of the exhibit, and in effect this scenario results in FY 2020 “charge increases” that are slightly *higher* for OMID and the Detroit Customer Class than for All Other Suburban Wholesale Customers. It also results in “charge increase” that is *higher* than the budget increase.

Any implementation of the “Charge Stability Adjustment” concept will require further analysis and policy development, including:

- Understanding that the OMID “Charge Stability Adjustment” (at least as referenced in this commentary) is suggested to be limited to the potential recognition of a successfully negotiated operating agreement for the Northeast Sewer Pump Station;
- Acknowledging that OMID Cost Pool adjustments are applicable to the OMID Customer only, while CSO Cost Pool adjustments are subject to the 83 / 17 allocation agreement;
- Establishing material thresholds for implementing “Charge Stability Adjustments”;
- Understanding how I&E Funds are generated, included in charges, committed, and expended;
- Understanding that there may be a need to delay implementation of the concept by a year to allow for actual cost to be reviewed.

We are prepared to discuss this matter at your convenience.



Illustration of Potential GLWA *Charge Stabilization Adjustment* Strategy

|   | (1)   | (2)                   | (3)              | (4)               | (5)               |
|---|---|-----------------------|------------------|-------------------|-------------------|
|   | Cost Pool Allocation (* Excluding Industrial Waste Control) |                       |                  |                   |                   |
|   | Common<br>to All  | Suburban<br>Wholesale | OMID<br>Specific | CSO<br>Facilities | TOTAL             |
| <u>SHAREs</u>                                 |   |                       |                  |                   |                   |
| 1 OMID  | 16.436%   | 22.182%               | 100.000%         | 2.651%            |                   |
| 2 Other Suburban Wholesale                    | 46.623%   | 77.818%               |                  | 14.349%           |                   |
| 3 Detroit Customer Class                      | 36.942%   |                       |                  | 83.000%           |                   |
| 4 FY 2019 <b>BUDGET</b> Revenue Req'ts        | 375,967,300   | 9,704,200             | 10,502,500       | 59,801,600        | 455,975,600       |
| <u>Allocated to Customers - CHARGES</u>       |   |                       |                  |                   |                   |
| 5 OMID  | 61,793,400  | 2,152,600             | 10,502,500       | 1,585,500         | 76,034,000        |
| 6 Other Suburban Wholesale                    | 175,285,600   | 7,551,600             | 0                | 8,580,800         | 191,418,000       |
| 7 Detroit Customer Class                      | 138,888,300   | 0                     | 0                | 49,635,300        | 188,523,600       |
| 8 Total Allocated for CHARGES                 | 375,967,300   | 9,704,200             | 10,502,500       | 59,801,600        | 455,975,600       |
| 9 What if Actual Costs are ___ % of Budget?   | 98%   | 98%                   | 90%              | 90%               | <b>Scenario 1</b> |
| 10 FY 2019 <b>ACTUAL</b> Revenue Req'ts       | 368,448,000   | 9,510,100             | 9,452,300        | 53,821,400        | 441,231,800       |
| <u>Allocated to Customers - CHARGES</u>       |   |                       |                  |                   |                   |
| 11 OMID                                       | 60,557,500  | 2,109,500             | 9,452,300        | 1,426,900         | 73,546,200        |
| 12 Other Suburban Wholesale                   | 171,779,900   | 7,400,600             | 0                | 7,722,700         | 186,903,200       |
| 13 Detroit Customer Class                     | 136,110,600   | 0                     | 0                | 44,671,800        | 180,782,400       |
| 14 Total Allocated for CHARGES                | 368,448,000   | 9,510,100             | 9,452,300        | 53,821,400        | 441,231,800       |
| 15 <b>ACTUAL</b> Variance from <b>BUDGET</b>  | (7,519,300)   | (194,100)             | (1,050,200)      | (5,980,200)       | (14,743,800)      |
| <u>Allocated to Customers - Variance</u>      |   |                       |                  |                   |                   |
| 16 OMID                                       | (1,235,900)   | (43,100)              | (1,050,200)      | (158,600)         | (2,487,800)       |
| 17 Other Suburban Wholesale                   | (3,505,700)   | (151,000)             | 0                | (858,100)         | (4,514,800)       |
| 18 Detroit Customer Class                     | (2,777,700)   | 0                     | 0                | (4,963,500)       | (7,741,200)       |
| 19 Total Allocated for CHARGES                | (7,519,300)   | (194,100)             | (1,050,200)      | (5,980,200)       | (14,743,800)      |
| 20 Charge Stability Strategy:                 | (a)   | (a)                   | (b)              | (b)               |                   |
| 21 Impact on Subsequent Charges               | NA  | NA                    | (1,050,200)      | (5,980,200)       | (7,030,400)       |
| 22 Impact on I&E / Reserves                   | (7,519,300)   | (194,100)             | NA               | NA                | (7,713,400)       |
| 23 FY 2020 Rev Req't Adjustment               | 4.0%  | 4.0%                  | 4.0%             | 4.0%              | 4.0%              |
| 24 FY 2020 <b>BUDGET</b> Revenue Req'ts       | 15,038,700  | 388,200               | 420,100          | 2,392,100         | 18,239,100        |
| 25 FY 2020 <b>Charge Stability Adjustment</b> | NA  | NA                    | (1,050,200)      | (5,980,200)       | (7,030,400)       |
| 26 FY 2020 Rev Req't for Charges              | 15,038,700  | 388,200               | (630,100)        | (3,588,100)       | 11,208,700        |
| <u>Impact on Customers - CHARGES</u>          |   |                       |                  |                   |                   |
| 27 OMID                                       | 2,471,700   | 86,100                | (630,100)        | (95,100)          | 1,832,600         |
| 28 Other Suburban Wholesale                   | 7,011,400   | 302,100               | 0                | (514,800)         | 6,798,700         |
| 29 Detroit Customer Class                     | 5,555,500   | 0                     | 0                | (2,978,100)       | 2,577,400         |
| 30 Total Allocated for CHARGES                | 15,038,600  | 388,200               | (630,100)        | (3,588,000)       | 11,208,700        |
| <u>Impact on Customers - % Adjustment</u>     |   |                       |                  |                   |                   |
| 31 OMID                                       | 4.0%  | 4.0%                  | -6.0%            | -6.0%             | 2.4%              |
| 32 Other Suburban Wholesale                   | 4.0%  | 4.0%                  |                  | -6.0%             | 3.6%              |
| 33 Detroit Customer Class                     | 4.0%  |                       |                  | -6.0%             | 1.4%              |
| 34 Total Allocated for CHARGES                | 4.0%  | 4.0%                  | -6.0%            | -6.0%             | 2.5%              |

(a) Variances in these cost pools are not reflected in subsequent charges, but rather impact GLWA reserve balances.

(b) Variances in these cost pools result in adjustments to Customer charges in a subsequent year.

TFG

Illustration of Potential GLWA *Charge Stabilization Adjustment* Strategy

|   | (1)   | (2)                   | (3)              | (4)               | (5)               |
|---|---|-----------------------|------------------|-------------------|-------------------|
|   | Cost Pool Allocation (* Excluding Industrial Waste Control) |                       |                  |                   |                   |
|   | Common<br>to All  | Suburban<br>Wholesale | OMID<br>Specific | CSO<br>Facilities | TOTAL             |
| <u>SHAREs</u>                                 |   |                       |                  |                   |                   |
| 1 OMID  | 16.436%   | 22.182%               | 100.000%         | 2.651%            |                   |
| 2 Other Suburban Wholesale                    | 46.623%   | 77.818%               |                  | 14.349%           |                   |
| 3 Detroit Customer Class                      | 36.942%   |                       |                  | 83.000%           |                   |
| 4 FY 2019 <b>BUDGET</b> Revenue Req'ts        | 375,967,300   | 9,704,200             | 10,502,500       | 59,801,600        | 455,975,600       |
| <u>Allocated to Customers - CHARGES</u>       |   |                       |                  |                   |                   |
| 5 OMID  | 61,793,400  | 2,152,600             | 10,502,500       | 1,585,500         | 76,034,000        |
| 6 Other Suburban Wholesale                    | 175,285,600   | 7,551,600             | 0                | 8,580,800         | 191,418,000       |
| 7 Detroit Customer Class                      | 138,888,300   | 0                     | 0                | 49,635,300        | 188,523,600       |
| 8 Total Allocated for CHARGES                 | 375,967,300   | 9,704,200             | 10,502,500       | 59,801,600        | 455,975,600       |
| 9 What if Actual Costs are ___ % of Budget?   | <b>101%</b>   | <b>101%</b>           | <b>105%</b>      | <b>105%</b>       | <b>Scenario 2</b> |
| 10 FY 2019 <b>ACTUAL</b> Revenue Req'ts       | 379,727,000   | 9,801,200             | 11,027,600       | 62,791,700        | 463,347,500       |
| <u>Allocated to Customers - CHARGES</u>       |   |                       |                  |                   |                   |
| 11 OMID                                       | 62,411,300  | 2,174,100             | 11,027,600       | 1,664,700         | 77,277,700        |
| 12 Other Suburban Wholesale                   | 177,038,400   | 7,627,100             | 0                | 9,009,900         | 193,675,400       |
| 13 Detroit Customer Class                     | 140,277,200   | 0                     | 0                | 52,117,100        | 192,394,300       |
| 14 Total Allocated for CHARGES                | 379,726,900   | 9,801,200             | 11,027,600       | 62,791,700        | 463,347,400       |
| 15 <b>ACTUAL</b> Variance from <b>BUDGET</b>  | 3,759,700   | 97,000                | 525,100          | 2,990,100         | 7,371,900         |
| <u>Allocated to Customers - Variance</u>      |   |                       |                  |                   |                   |
| 16 OMID                                       | 617,900   | 21,500                | 525,100          | 79,200            | 1,243,700         |
| 17 Other Suburban Wholesale                   | 1,752,800   | 75,500                | 0                | 429,100           | 2,257,400         |
| 18 Detroit Customer Class                     | 1,388,900   | 0                     | 0                | 2,481,800         | 3,870,700         |
| 19 Total Allocated for CHARGES                | 3,759,600   | 97,000                | 525,100          | 2,990,100         | 7,371,800         |
| 20 Charge Stability Strategy:                 | (a)   | (a)                   | (b)              | (b)               |                   |
| 21 Impact on Subsequent Charges               | NA  | NA                    | 525,100          | 2,990,100         | 3,515,200         |
| 22 Impact on I&E / Reserves                   | 3,759,600   | 97,000                | NA               | NA                | 3,856,600         |
| 23 FY 2020 Rev Req't Adjustment               | <b>4.0%</b>   | <b>4.0%</b>           | <b>4.0%</b>      | <b>4.0%</b>       | <b>4.0%</b>       |
| 24 FY 2020 <b>BUDGET</b> Revenue Req'ts       | 15,038,700  | 388,200               | 420,100          | 2,392,100         | 18,239,100        |
| 25 FY 2020 <b>Charge Stability Adjustment</b> | NA  | NA                    | 525,100          | 2,990,100         | 3,515,200         |
| 26 FY 2020 Rev Req't for Charges              | 15,038,700  | 388,200               | 945,200          | 5,382,200         | 21,754,300        |
| <u>Impact on Customers - CHARGES</u>          |   |                       |                  |                   |                   |
| 27 OMID                                       | 2,471,700   | 86,100                | 945,200          | 142,700           | 3,645,700         |
| 28 Other Suburban Wholesale                   | 7,011,400   | 302,100               | 0                | 772,300           | 8,085,800         |
| 29 Detroit Customer Class                     | 5,555,500   | 0                     | 0                | 4,467,200         | 10,022,700        |
| 30 Total Allocated for CHARGES                | 15,038,600  | 388,200               | 945,200          | 5,382,200         | 21,754,200        |
| <u>Impact on Customers - % Adjustment</u>     |   |                       |                  |                   |                   |
| 31 OMID                                       | 4.0%  | 4.0%                  | 9.0%             | 9.0%              | 4.8%              |
| 32 Other Suburban Wholesale                   | 4.0%  | 4.0%                  |                  | 9.0%              | 4.2%              |
| 33 Detroit Customer Class                     | 4.0%  |                       |                  | 9.0%              | 5.3%              |
| 34 Total Allocated for CHARGES                | 4.0%  | 4.0%                  | 9.0%             | 9.0%              | 4.8%              |

(a) Variances in these cost pools are not reflected in subsequent charges, but rather impact GLWA reserve balances.

(b) Variances in these cost pools result in adjustments to Customer charges in a subsequent year.

TFG



## Financial Services Audit Committee Communication

**Date:** March 16, 2018

**To:** Great Lakes Water Authority Audit Committee

**From:** Deirdre Henry, Treasury Manager

**Re:** Quarterly Investment Report through December 31, 2017 (Unaudited)

**Background:** As stated in section 14 of the Great Lakes Water Authority (GLWA) Investment Policy, quarterly reporting shall be presented to provide a clear picture of the status of the current GLWA investment portfolio. The attached report, prepared and presented by PFM Asset Management LLC, summarizes portfolio information through December 31, 2017 (unaudited).

**Analysis:** The Quarterly Investment Report through December 31, 2017 is in compliance with the requirements of Public Act 20 of 1948, as amended and the GLWA Investment Policy. GLWA is actively investing its funds in a diversified portfolio which includes bank deposits, money market funds, a local government investment pool, U.S. Treasuries, Federal Agencies, and commercial paper. All securities in the portfolio are in compliance with the GLWA investment policy. Key metrics are provided below with additional commentary in the attached report.

- Yield to Market at Cost compared to market index:
  - As of December 31, 2017: 1.36% vs 1.25% (3-Month Treasury Index)
  - As of September 30, 2017: 1.09% vs 0.98% (3-Month Treasury Index)
- Portfolio Allocation in Cash/Money Market Securities
  - As of December 31, 2017: 60%
  - As of September 30, 2017: 56%

Over the next sixty to ninety days, the GLWA Financial Services Area is implementing process improvements to more clearly define bond and Improvement & Extension Fund cash flows and close out interfund and receiving fund activity monthly. This will enable the GLWA Treasury group to coordinate expanded cashflow forecasting on a rolling 24-month basis. PFM Asset Management LLC will use this additional information to identify strategies to optimize investment returns while meeting GLWA standards for safety and liquidity.

**Proposed Action:** Receive and file report.

# Great Lakes Water Authority

*Investment Performance Report – December 2017*



## **Table of Contents**

### **I. Executive Summary**

### **II. Investment Strategy**

### **III. Investment Progression**

### **IV. Market Overview and Outlook**

### **V. Portfolio Snapshot**

- Security Type
- Credit Quality
- Account Purpose
- Maturity Distribution
- Yield at Cost and Market
- Yield to Maturity vs. Duration
- Investment Income
- Portfolio Holdings

### **VI. Appendix**

- Economic Update



## Great Lakes Water Authority Executive Summary

### PORTFOLIO RECAP

- **Safety** – The overall portfolio is diversified amongst cash, bank deposits, U.S. Treasuries, Federal Agencies, commercial paper, SEC-registered money market funds, and a local government investment pool. The total credit profile of the pool is strong with over 98% of the assets invested in bank deposits or securities that are rated within the two highest short and long-term rating classifications as established by S&P.
- **Liquidity** – The portfolio's liquidity weighting to overnight funds has remained steady, with 59.7% of the total assets maturing overnight.
- **Return** – The overall yield increased to 1.36% as of December 31, 2017 versus 1.09% at September 30, 2017. The Authority has earned \$5,534,062 in investment income for fiscal year 2018 to date on a book value basis. Based on the current interest rate environment, the investment income earned for the previous quarter, and assuming that the Authority maintains the same investable balances for the remainder of the fiscal year, we are projecting that the Authority will earn approximately \$11.0 million in investment income for fiscal year 2018.
- **Compliance** – The aggregate portfolio is in compliance with the Authority's investment policy and Michigan Public Act 20.

### AVAILABLE FUNDS

| Type                    | Financial Institution | Market Value                  | YTM @ Market (as of 12/31/17) |
|-------------------------|-----------------------|-------------------------------|-------------------------------|
| Deposit Account         | Comerica              | \$34,695                      | 0.25%                         |
| Deposit Account         | First Independence    | \$15,910,927                  | 0.05%                         |
| Deposit Account         | Chase                 | \$16,939,353                  | 0.37%                         |
| Trust Money Market Fund | U.S. Bank             | \$482,468,523                 | 1.15%                         |
| Money Market Fund       | JP Morgan             | \$73,015,137                  | 1.08%                         |
| LGIP                    | GovMIC                | \$69,597,359                  | 1.25%                         |
| Managed Funds           | JP Morgan             | \$4,997,000                   | 1.58%                         |
| Managed Funds           | PFM                   | \$439,303,593                 | 1.73%                         |
| <b><u>TOTAL</u></b>     |                       | <b><u>\$1,102,266,586</u></b> | <b><u>1.36%</u></b>           |

The accounts at Comerica Bank get an earnings credit to offset bank fees. The earnings in the accounts at First Independence Bank is credited to the contractors and not the Authority. In addition to the totals listed above, there also exists surety bonds in the amount of \$331,914,579 as of December 31, 2017. "LGIP" stands for Local Government Investment Pool and "MMF" stands for Money Market Fund.

**Great Lakes Water Authority  
Investment Strategy**

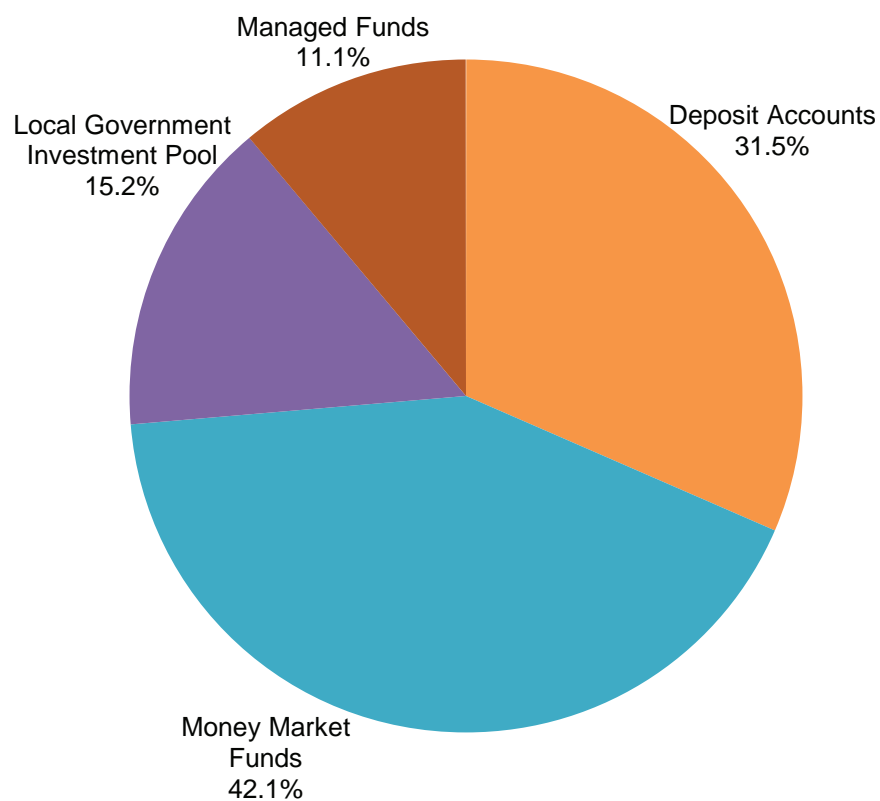
**GLWA INVESTMENT STRATEGY**

- To date, the Authority has continued to invest its funds in assets concentrated in a mixture of short and intermediate-term investments to ensure sufficient liquidity; there was a slight increase in funds maturing overnight at the end of December to cover debt service, debt reserve, and pension obligation payments and requirements
- The aggregate portfolio was yielding 1.36% at the end of December\*
  - This compares to the 1.25% yield of the Bank of America / Merrill Lynch 3-Month U.S. Treasury Bill Index as of 12/31/2017, which is a comparable market indicator
- The Authority has continued to implement a disciplined investment plan to provide improved safety and diversification and putting every dollar to work
- For the third quarter of FY 2018, the investment strategy steps to be taken includes seeking opportunities to invest intermediate and longer-term funds based on refined cash flows (i.e., construction funds, trust funds, etc. that can be invested beyond three months)
- The Authority will continue to work with its investment manager to identify strategies to maximize future investment income while meeting the objectives of safety and liquidity
- Assuming that the Authority maintains the same investable balances for FY 2018 and FY 2019 and the interest rate environment remains in a similar range, we conservatively expect to earn approximately \$11.0 million in interest income in FY 2018 and over \$14.0 million in FY 2019

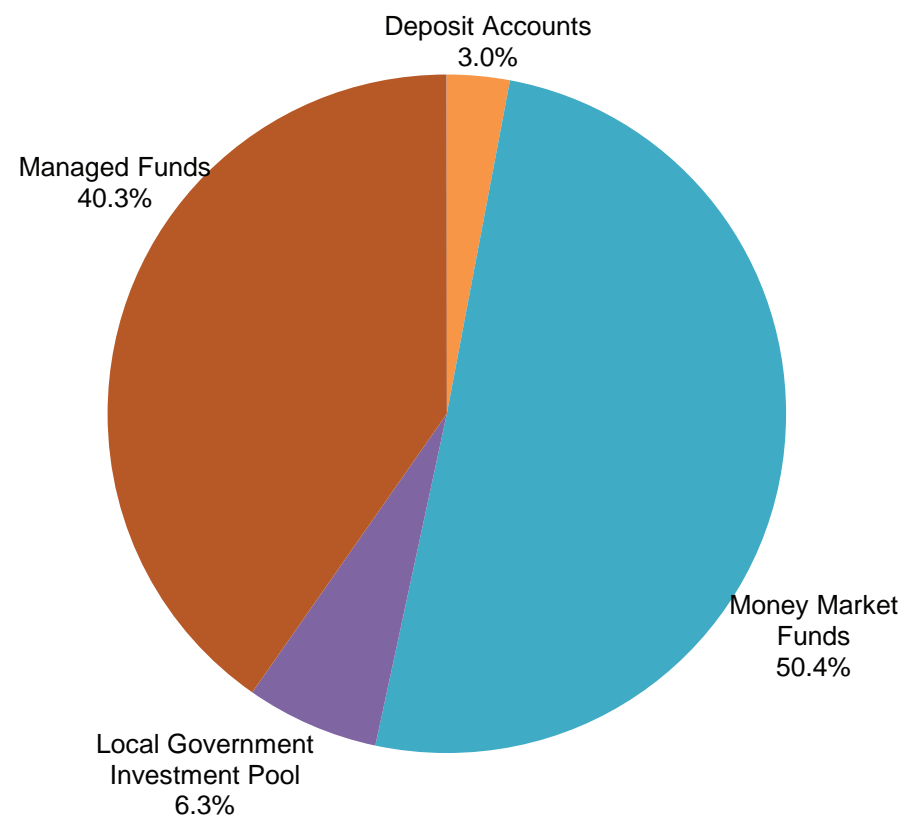
\* Current market yield as of December 31, 2017.

Great Lakes Water Authority  
Investment Progression

Investment Types as of 12/31/2016



Investment Types as of 12/31/2017





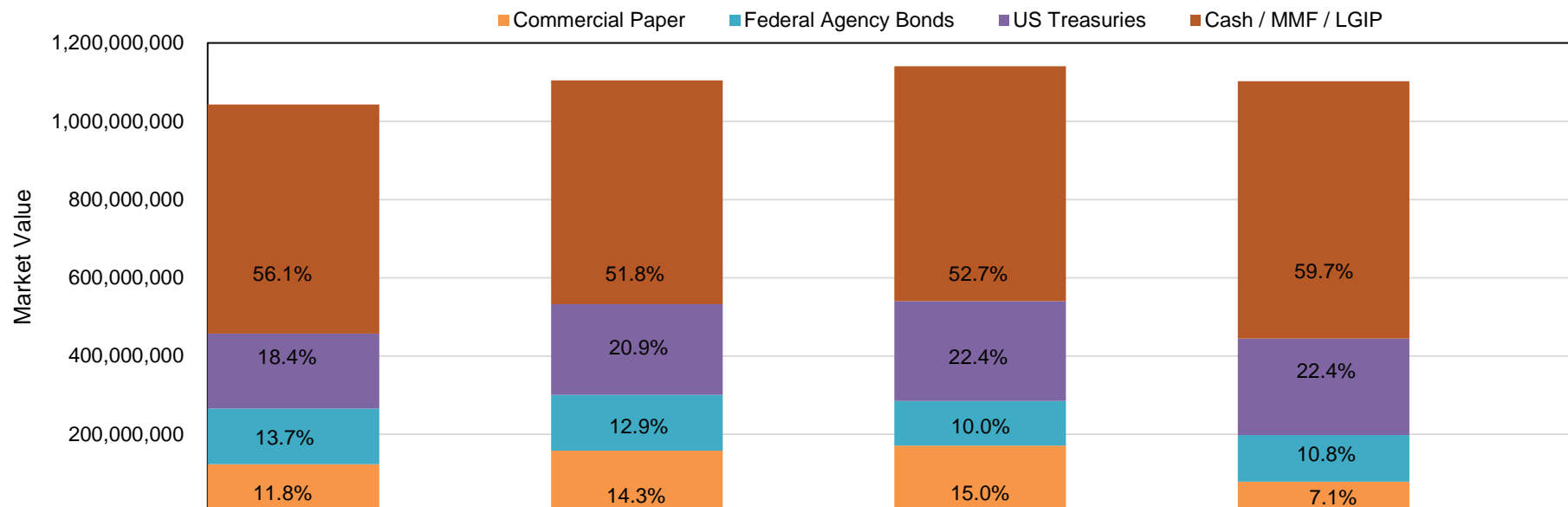
**Great Lakes Water Authority  
Market Overview and Outlook****FIXED INCOME MARKET – ECONOMIC HIGHLIGHTS**

- In the fourth quarter of 2017, economic data was generally favorable as the unemployment rate hovered near a 15-year low, inflation remained in check, and the Federal Reserve raised rates for a third time in 2017. At the same time, both consumer and business confidence remained high, and Congress passed large corporate and individual tax cuts.
- Market reaction to the final tax bill reflected expectations for at least a near-term positive economic impact causing both interest rates and the U.S. equity markets to rise.
- The post-tax bill market moves amplified existing trends. During the quarter:
  - 2-Year Treasury yields rose by 40 basis points (0.40%), reflecting the December rate hike by the Federal Open Market Committee (“FOMC”) and expectations for more policy changes going forward
  - 10-year Treasury yields rose by 9 basis points (0.09%), muted by low inflation prospects and strong demand for yield by global investors
  - The yield curve flattened to the narrowest level since 2007
  - Equity markets capped the first calendar year ever with twelve consecutive months of positive returns
- The strength of the U.S. economy, coupled with the December Fed rate hike, drove yields on all but the longest Treasury maturities higher in the fourth quarter of 2017. As a result, fixed-income returns were mixed for the quarter, with shorter indexes generating negative returns; but, reinvestment opportunities became more attractive. Higher yields, narrow credit spreads, and a flat yield curve created a challenging investment landscape.

**Great Lakes Water Authority  
Market Overview and Outlook****FIXED INCOME MARKET – ECONOMIC HIGHLIGHTS**

- Credit instruments and other “spread product” generally outperformed Treasuries for the quarter relative to government securities. The primary drivers of portfolio performance were asset allocation and diversification.
  - Federal Agency yield spreads remained very narrow relative to similar maturity Treasuries throughout the quarter. Minimal incremental income and similar relative price changes resulted in little excess return from the Agency sector during the quarter (excess return is the return on a sector over and above the return on similar duration Treasuries).
- Generally, the economic themes that brought 2017 to a close will carry forward into 2018, including: improving growth; stable job production; healthy personal consumption; and strong corporate fundamentals.
- Following three hikes in 2017, the Fed’s “dot plot,” released after the December Federal Open Market Committee (“FOMC”) meeting, indicated an expectation for three more hikes in 2018. As of year-end, the market-implied probability of a rate hike at the March FOMC meeting was around 70%.
- The FOMC starts 2018 balancing several factors: persistently low inflation; uncertainty around the pace of economic growth; and the continuation of balance sheet normalization. Additionally, a change in leadership at the Fed – Jerome Powell has replaced Janet Yellen as Fed Chair – has the potential to create some uncertainty. Powell is expected to follow closely in Yellen’s footsteps.
- The outlook for some of the major investment-grade fixed-income sectors are as follows:
  - Federal Agency spreads remain tight; however, the best value relative to U.S. Treasuries is in the 2 – 3 year area of the curve.
  - Given the steepness of the short-term yield curve (under one year), short-term credit instruments like commercial paper look particularly attractive as their current yields fully compensate for at least three Fed rate hikes in 2018.

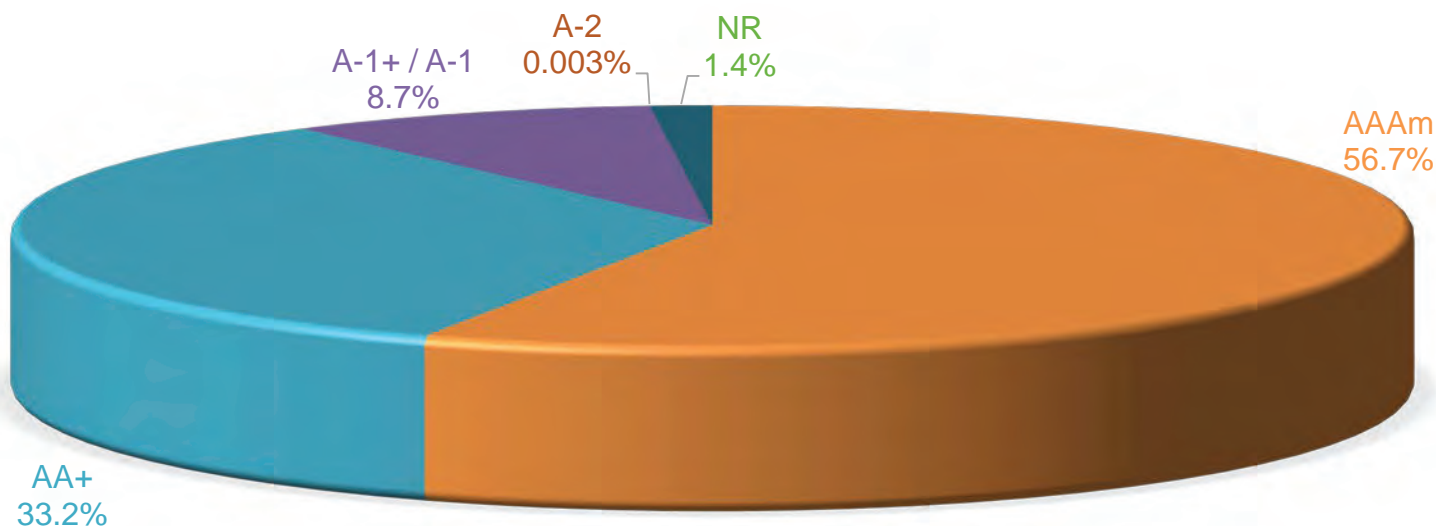
**Great Lakes Water Authority  
Investments – By Security Type**



| Security Type     | September            |                  | October              |                  | November             |                  | December             |                  |
|-------------------|----------------------|------------------|----------------------|------------------|----------------------|------------------|----------------------|------------------|
|                   | Market Value         | Asset Allocation | Market Value         | Asset Allocation | Market Value         | Asset Allocation | Market Value         | Asset Allocation |
| Commercial Paper  | 123,134,114          | 11.8%            | 158,194,416          | 14.3%            | 170,695,566          | 15.0%            | 78,757,023           | 7.1%             |
| Federal Agencies  | 142,953,689          | 13.7%            | 142,851,047          | 12.9%            | 114,120,395          | 10.0%            | 119,048,302          | 10.8%            |
| U.S. Treasuries   | 191,617,373          | 18.4%            | 231,237,582          | 20.9%            | 255,151,533          | 22.4%            | 246,495,268          | 22.4%            |
| Cash / MMF / LGIP | 585,116,893          | 56.1%            | 572,390,125          | 51.8%            | 600,863,841          | 52.7%            | 657,965,993          | 59.7%            |
| <b>Total</b>      | <b>1,042,822,070</b> | <b>100.0%</b>    | <b>1,104,673,170</b> | <b>100.0%</b>    | <b>1,140,831,335</b> | <b>100.0%</b>    | <b>1,102,266,586</b> | <b>100.0%</b>    |

*In addition to the totals listed above, there also exists surety bonds in the amount of \$331,914,579 as of December 31, 2017. Please note that cash levels at the end of December increased slightly from the levels seen throughout the quarter due to maturities to meet January 1<sup>st</sup> debt payments.*

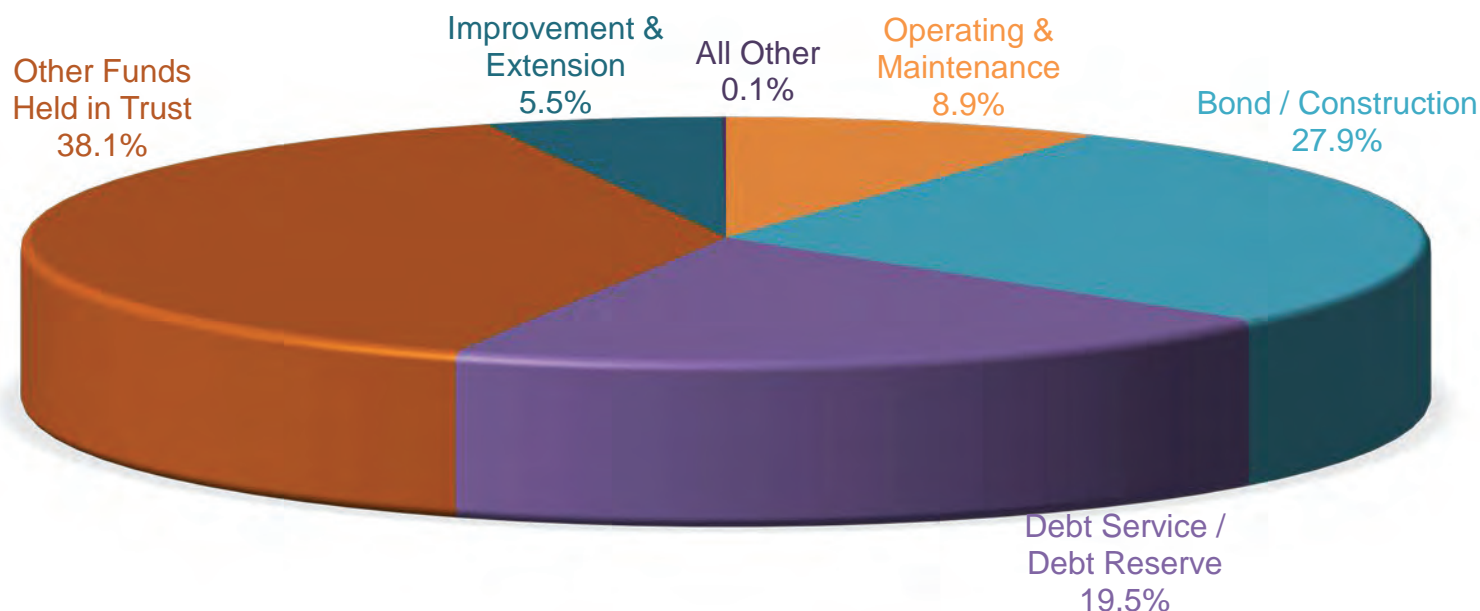
**Great Lakes Water Authority  
Investments – By Credit Quality  
As of December 31, 2017**



| Credit Quality | Market Value         | Asset Allocation |
|----------------|----------------------|------------------|
| <b>Ratings</b> |                      |                  |
| AAAm           | 625,081,019          | 56.7%            |
| AA+            | 365,543,570          | 33.2%            |
| A-1 + / A-1    | 95,696,376           | 8.7%             |
| A-2            | 34,695               | 0.003%           |
| NR             | 15,910,927           | 1.4%             |
| <b>Totals</b>  | <b>1,102,266,586</b> | <b>100.0%</b>    |

*In addition to the totals listed above, there also exists surety bonds in the amount of \$331,914,579 as of December 31, 2017.*

**Great Lakes Water Authority**  
**Investment Analysis – By Account Purpose**  
**As of December 31, 2017**



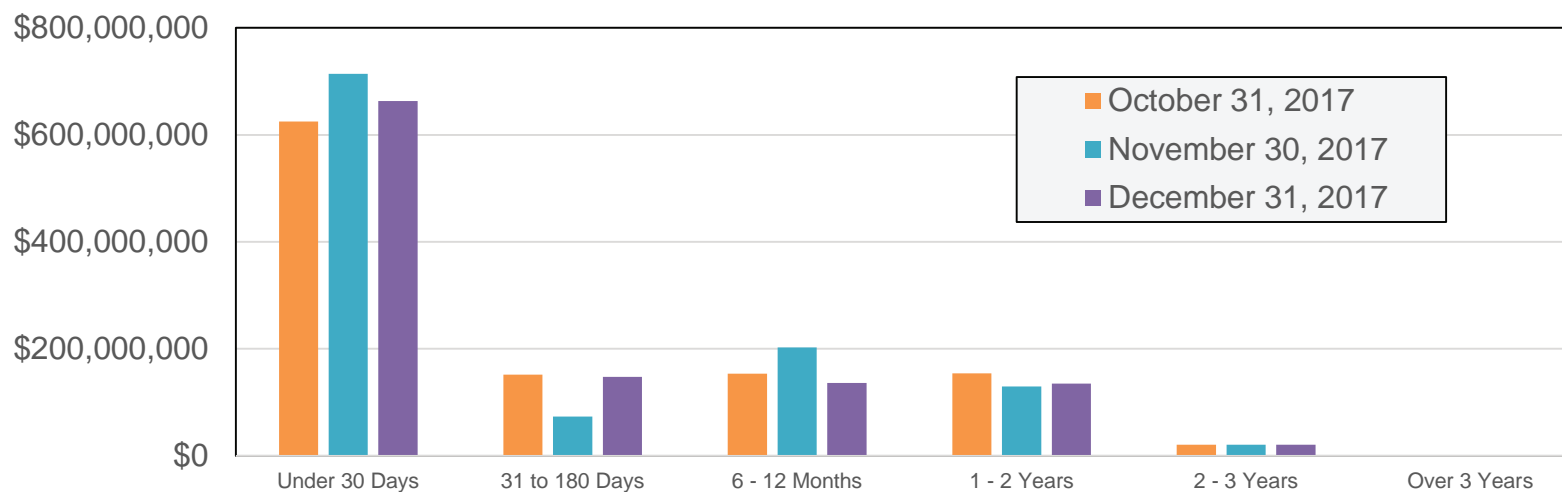
| Account Purpose             | Market Value            | % Allocation  |
|-----------------------------|-------------------------|---------------|
| Operating & Maintenance     | \$ 97,597,804           | 8.9%          |
| Bond / Construction         | \$ 307,105,116          | 27.9%         |
| Debt Service / Debt Reserve | \$ 215,373,601          | 19.5%         |
| Other Funds Held in Trust   | \$ 420,143,177          | 38.1%         |
| Improvement & Extension     | \$ 60,952,089           | 5.5%          |
| All Other                   | \$ 1,094,800            | 0.1%          |
| <b>Total</b>                | <b>\$ 1,102,266,586</b> | <b>100.0%</b> |

| Other Funds Held in Trust         | Market Value          | % Allocation  |
|-----------------------------------|-----------------------|---------------|
| Budget Stabilization Funds        | \$ 11,009,555         | 2.6%          |
| Extraordinary R & R Reserve Funds | \$ 58,287,370         | 13.9%         |
| Receiving Funds                   | \$ 327,272,440        | 77.9%         |
| Pension Obligation Funds          | \$ 20,748,385         | 4.9%          |
| WRAP Funds                        | \$ 2,825,427          | 0.7%          |
| <b>Total</b>                      | <b>\$ 420,143,177</b> | <b>100.0%</b> |

In addition to the totals listed above, there also exists surety bonds in the amount of \$331,914,579 as of December 31, 2017. "All Other" funds includes restricted Water Affordability funds held on behalf of DWSD.

### Great Lakes Water Authority Investment Analysis – By Maturity

| Maturity Distribution | October 31, 2017        |               | November 30, 2017       |               | December 31, 2017       |               |
|-----------------------|-------------------------|---------------|-------------------------|---------------|-------------------------|---------------|
|                       |                         | %             |                         | %             |                         | %             |
| Under 30 Days         | \$ 624,652,997          | 56.5%         | \$ 714,060,154          | 62.6%         | \$ 662,956,012          | 60.1%         |
| 31 to 180 Days        | 151,697,149             | 13.7%         | 73,294,397              | 6.4%          | 147,606,350             | 13.4%         |
| 6 - 12 Months         | 153,507,697             | 13.9%         | 202,787,984             | 17.8%         | 136,152,908             | 12.4%         |
| 1 - 2 Years           | 154,026,821             | 13.9%         | 129,988,988             | 11.4%         | 134,875,104             | 12.2%         |
| 2 - 3 Years           | 20,788,507              | 1.9%          | 20,699,813              | 1.8%          | 20,676,212              | 1.9%          |
| Over 3 Years          | -                       | 0.0%          | -                       | 0.0%          | -                       | 0.0%          |
| <b>Totals</b>         | <b>\$ 1,104,673,170</b> | <b>100.0%</b> | <b>\$ 1,140,831,335</b> | <b>100.0%</b> | <b>\$ 1,102,266,586</b> | <b>100.0%</b> |



In addition to the totals listed above, there also exists surety bonds in the amount of \$331,914,579 as of December 31, 2017.



**Great Lakes Water Authority  
Investment Accounts – Yield at Cost & Market  
As of December 31, 2017**

*The portfolio is in compliance with the Authority's investment policy.*

|  | As of December 31, 2017 |                     | As of September 30, 2017 |                     |
|--|-------------------------|---------------------|--------------------------|---------------------|
|  | YTM @ Cost              | YTM @ Market        | YTM @ Cost               | YTM @ Market        |
| <b>Bank Deposits</b>                   |                         |                     |                          |                     |
| Comerica                               | 0.25%                   | 0.25%               | 0.25%                    | 0.25%               |
| First Independence                     | 0.05%                   | 0.05%               | 0.05%                    | 0.05%               |
| JP Morgan Chase                        | 0.37%                   |                     | 0.31%                    | 0.31%               |
| <b>Sub-Total Bank Deposits</b>         | <b>0.22%</b>            | <b>0.22%</b>        | <b>0.21%</b>             | <b>0.21%</b>        |
| <b>Money Market Funds / LGIPs</b>      |                         |                     |                          |                     |
| GovMIC                                 | 1.25%                   | 1.25%               | 1.13%                    | 1.13%               |
| U.S. Bank - First American MMF         | 1.15%                   | 1.15%               | 0.89%                    | 0.89%               |
| JP Morgan Securities - Blackrock MMF   | 1.08%                   | 1.08%               | 0.93%                    | 0.93%               |
| <b>Sub-Total MMF / LGIPs</b>           | <b>1.15%</b>            | <b>1.15%</b>        | <b>0.92%</b>             | <b>0.92%</b>        |
| <b>Investment Portfolios</b>           |                         |                     |                          |                     |
| Sewage - Construction Bond 5421        | 1.35%                   | 1.58%               | 1.10%                    | 0.95%               |
| Sewage SR Debt Serv 5403               | 1.51%                   | 1.70%               | 1.33%                    | 1.34%               |
| Sewage SR Res 5400                     | 1.31%                   | 1.83%               | 1.10%                    | 1.42%               |
| Sew 2nd Debt Serv 5403                 | 1.55%                   | 1.76%               | 1.31%                    | 1.30%               |
| Sewage 2nd Res 5481                    | 1.29%                   | 1.84%               | 1.01%                    | 1.40%               |
| Sew SRF Debt Serv 5410                 | 1.45%                   | 1.64%               | 1.16%                    | 1.21%               |
| Sewage R & R                           | 1.32%                   | 1.52%               | 1.15%                    | 1.16%               |
| Sewer Pension Obligation               | 1.27%                   | 1.47%               | 1.22%                    | 1.28%               |
| Sewer Bond Fund                        | 1.37%                   | 1.78%               | 1.36%                    | 1.41%               |
| Sewer O&M Pension Sub Account          | 1.31%                   | 1.47%               | 1.24%                    | 1.28%               |
| Water SR Debt Ser 5503                 | 1.54%                   | 1.73%               | 1.33%                    | 1.34%               |
| Water SR Reserve 5500                  | 1.13%                   | 1.73%               | 1.13%                    | 1.46%               |
| Water 2nd Debt Serv 5503               | 1.55%                   | 1.72%               | 1.31%                    | 1.31%               |
| Water 2nd Res 5581                     | 1.35%                   | 1.86%               | 0.70%                    | 1.15%               |
| Water SRF Debt Serv 5575               | 1.52%                   | 1.67%               | 0.00%                    | 0.00%               |
| Water R & R                            | 1.32%                   | 1.52%               | 1.15%                    | 1.16%               |
| Water Pension Obligation               | 1.28%                   | 1.47%               | 1.22%                    | 1.28%               |
| Water Bond Fund                        | 1.37%                   | 1.79%               | 1.34%                    | 1.42%               |
| Water O&M Pension Sub Account          | 1.31%                   | 1.47%               | 1.24%                    | 1.28%               |
| <b>Sub-Total Investment Portfolios</b> | <b>1.36%</b>            | <b>1.73%</b>        | <b>1.27%</b>             | <b>1.35%</b>        |
| <b><u>Grand Total</u></b>              | <b><u>1.21%</u></b>     | <b><u>1.36%</u></b> | <b><u>1.05%</u></b>      | <b><u>1.09%</u></b> |
| <b>Short-Term Index</b>                |                         |                     |                          |                     |
| BoA / ML 3-Month Treasury Index        |                         | 1.25%               |                          | 0.98%               |

The accounts at Comerica Bank get an earnings credit to offset bank fees. The earnings in the accounts at First Independence Bank is credited to the contractors and not the Authority. The Bank of America / Merrill Lynch 3-Month Treasury Bill is an unmanaged index tracking the on-the-run Treasury Bill. The index is produced and maintained by Bank of America / Merrill Lynch & Co. YTM @ Cost is the expected return, based on the original cost, the annual interest receipts, maturity value and the time period from purchase date to maturity, stated as a percentage, on an annualized basis. YTM @ Market is the rate of return, based on the current market value, the annual interest receipts, maturity value and time period remaining until maturity, stated as a percentage, on an annualized basis.





**Great Lakes Water Authority  
Demonstration of Yield to Maturity vs. Duration  
As of December 31, 2017**

- The comparison agencies included on the list below were selected based on type and/or other non-performance based criteria to show a broad range of water entities/utilities. This peer group list does not represent an endorsement of any of the public agencies or their services. The types of funds (e.g., bond proceeds, debt service, etc.) and duration of the overall portfolios listed below as well as the various differences in permitted investments and allowable credit capacity in state statutes (i.e., the ability or non-ability to invest in long-term corporate credit) will have a direct impact on the corresponding yields at market.
- The overall yield of the Authority's aggregate portfolio compares favorably to those of other short-term indices (i.e., the S&P LGIP index and the 3-month U.S. Treasury index).
- The Authority does not have a potential for a longer duration portfolio when compared to other similar water entities/utilities as the Authority's covenants limits and restricts its ability in managing funds to longer-term strategy.

| As of December 31, 2017                            |                     |                     |                           |                                  |
|--|---------------------|---------------------|---------------------------|----------------------------------|
|  | <i>Market Value</i> | <i>YTM @ Market</i> | <i>Effective Duration</i> | <i>Weighted Average Maturity</i> |
| <b>GLWA</b>  |                     |                     |                           |                                  |
| Great Lakes Water Authority                        | \$1,102,266,586     | 1.36%               | 0.36 Years                | 133 Days                         |
| <b>Short/Intermediate-Term Indices</b>             |                     |                     |                           |                                  |
| S&P Rated Government Investment Pool Index         |                     | 1.13%               | 0.10 Years                | 36 Days                          |
| BoA / ML 3-Month Treasury Index                    |                     | 1.25%               | 0.16 Years                | 90 Days                          |
| BoA / ML 6-Month Treasury Index                    |                     | 1.48%               | 0.41 Years                | 180 Days                         |
| BoA / ML 1-Year Treasury Index                     |                     | 1.79%               | 0.90 Years                | 365 Days                         |
| BoA / ML 1-3 Year Treasury Index                   |                     | 1.88%               | 1.80 Years                | 657 Days                         |
| BoA / ML 1-5 Year Treasury Index                   |                     | 1.97%               | 2.59 Years                | 945 Days                         |
| <b>Peer Analysis (Water Entities / Utilities)</b>  |                     |                     |                           |                                  |
| Alameda County Water District, CA                  | \$98,154,414        | 2.06%               | 2.57 Years                | 978 Days                         |
| Coachella Valley Water District, CA                | \$456,820,663       | 1.95%               | 1.84 Years                | 743 Days                         |
| District of Columbia Water & Sewer Authority, DC   | \$309,620,203       | 1.64%               | 0.63 Years                | 234 Days                         |
| DuPage Water Commission, IL                        | \$138,728,230       | 1.99%               | 2.26 Years                | 935 Days                         |
| Fairfax County Water Authority, VA                 | \$249,258,092       | 1.86%               | 1.83 Years                | 690 Days                         |
| San Bernardino Valley Municipal Water District, CA | \$299,342,431       | 1.94%               | 1.80 Years                | 677 Days                         |
| Truckee Meadows Water Authority, NV                | \$118,464,936       | 1.82%               | 1.03 Years                | 383 Days                         |

The BoA / ML indexes are unmanaged indexes tracking on-the-run Treasuries. These indexes are produced and maintained by Bank of America / Merrill Lynch & Co. Yield to maturity is the rate of return, based on the current market value, the annual interest receipts, maturity value and time period remaining until maturity, stated as a percentage, on an annualized basis.





Great Lakes Water Authority  
Investment Income (by Book Value)  
As of December 31, 2017

**INVESTMENT INCOME BY MONTH**

| Month                       | Interest Earned<br>During Period | Realized<br>Gain / Loss | Investment Income            |
|-----------------------------|----------------------------------|-------------------------|------------------------------|
| July 2017                   | \$637,658.61                     | \$0.00                  | \$637,658.61                 |
| August 2017                 | \$940,941.92                     | \$0.00                  | \$940,941.92                 |
| September 2017              | \$884,798.87                     | \$0.00                  | \$884,798.87                 |
| October 2017                | \$917,018.83                     | \$0.00                  | \$917,018.83                 |
| November 2017               | \$979,111.10                     | \$0.00                  | \$979,111.10                 |
| December 2017               | \$1,174,533.01                   | \$0.00                  | \$1,174,533.01               |
| <b><u>FY 2018 Y-T-D</u></b> | <b><u>\$5,534,062.34</u></b>     | <b><u>\$0.00</u></b>    | <b><u>\$5,534,062.34</u></b> |

*These figures are based upon actual interest earned and posted to the Authority's various accounts via book value and does not include any earnings credit rate tied to the Authority's bank deposits.*



**Great Lakes Water Authority  
Portfolio Holdings  
As of December 31, 2017**

| DESCRIPTION                                  | CUSIP     | PAR AMOUNT   | MATURITY DATE | SETTLEMENT DATE | YTM AT COST | ORIGINAL COST | DAYS TO MATURITY | ACCRUED INTEREST | TOTAL VALUE     |
|--|-----------|--------------|---------------|-----------------|-------------|---------------|------------------|------------------|-----------------|
| <b>Short-Term Bank Deposits / MMF / LGIP</b> |           |              |               |                 |             |               |                  |                  |                 |
| COMERICA BANK                                |           | \$ 34,695    | 1/1/2018      | 12/31/2017      | 0.25%       | \$ 34,695     | 1                | \$ -             | \$ 34,695       |
| FIRST INDEPENDENCE BANK                      |           | 15,910,927   | 1/1/2018      | 12/31/2017      | 0.05%       | 15,910,927    | 1                | -                | 15,910,927      |
| JP MORGAN CHASE                              |           | 16,939,353   | 1/1/2018      | 12/31/2017      | 0.37%       | 16,939,353    | 1                | -                | 16,939,353      |
| GoMIC  |           | 69,597,359   | 1/1/2018      | 12/31/2017      | 1.25%       | 69,597,359    | 1                | -                | 69,597,359      |
| U.S. BANK - FIRST AMERICAN MMF               |           | 482,468,523  | 1/1/2018      | 12/31/2017      | 1.15%       | 482,468,523   | 1                | -                | 482,468,523     |
| JP MORGAN SECURITIES - BLACKROCK MMF         |           | 73,015,137   | 1/1/2018      | 12/31/2017      | 1.08%       | 73,015,137    | 1                | -                | 73,015,137      |
| <b>Federal Agencies</b>                      |           |              |               |                 |             |               |                  |                  |                 |
| FNMA 1 2/28/2018-13                          | 3136G05Y3 | \$ 5,000,000 | 2/28/2018     | 2/1/2016        | 1.35%       | \$ 4,964,650  | 59               | \$ 16,667        | \$ 4,997,000.00 |
| FHLB 0 6/20/2018                             | 313385YH3 | 703,000      | 6/20/2018     | 7/19/2017       | 1.24%       | 695,061       | 171              | -                | 698,149         |
| FHLB 0 6/20/2018                             | 313385YH3 | 3,520,000    | 6/20/2018     | 7/19/2017       | 1.24%       | 3,480,247     | 171              | -                | 3,495,712       |
| FHLB 0 6/20/2018                             | 313385YH3 | 493,000      | 6/20/2018     | 7/19/2017       | 1.24%       | 487,432       | 171              | -                | 489,598         |
| FHLB 0 6/20/2018                             | 313385YH3 | 2,974,000    | 6/20/2018     | 7/19/2017       | 1.24%       | 2,940,414     | 171              | -                | 2,953,479       |
| FHLB 0.875 6/29/2018                         | 3130A8BD4 | 3,025,000    | 6/29/2018     | 10/31/2016      | 0.88%       | 3,024,577     | 180              | 147              | 3,013,808       |
| FNMA 1.15 10/30/2018-14                      | 3136G1KL2 | 10,000,000   | 10/30/2018    | 4/30/2013       | 1.36%       | 9,889,200     | 303              | 19,167           | 9,947,400       |
| FNMA 1.375 1/28/2019                         | 3135G0H63 | 5,200,000    | 1/28/2019     | 7/26/2017       | 1.39%       | 5,198,908     | 393              | 30,388           | 5,176,756       |
| FNMA 1.375 1/28/2019                         | 3135G0H63 | 6,695,000    | 1/28/2019     | 8/31/2017       | 1.31%       | 6,700,758     | 393              | 39,124           | 6,665,073       |
| FNMA 1 2/26/2019                             | 3135G0J53 | 5,205,000    | 2/26/2019     | 7/26/2017       | 1.39%       | 5,173,666     | 422              | 18,073           | 5,155,813       |
| FNMA 1 2/26/2019                             | 3135G0J53 | 6,690,000    | 2/26/2019     | 8/31/2017       | 1.33%       | 6,657,821     | 422              | 23,229           | 6,626,780       |
| FHLB 1.5 3/8/2019                            | 3133782M2 | 6,595,000    | 3/8/2019      | 8/31/2017       | 1.34%       | 6,611,026     | 432              | 31,051           | 6,567,895       |
| FHLB 1.375 3/18/2019                         | 3130AAXX1 | 5,175,000    | 3/18/2019     | 7/26/2017       | 1.38%       | 5,174,431     | 442              | 20,359           | 5,145,089       |
| FHLB 1.375 5/28/2019                         | 3130ABF92 | 5,260,000    | 5/28/2019     | 7/26/2017       | 1.40%       | 5,257,423     | 513              | 6,630            | 5,224,232       |
| FHLB 1.375 5/28/2019                         | 3130ABF92 | 5,245,000    | 5/28/2019     | 8/31/2017       | 1.34%       | 5,248,409     | 513              | 6,611            | 5,209,334       |
| FHLB 1.625 6/14/2019                         | 313379EE5 | 7,050,000    | 6/14/2019     | 9/1/2017        | 1.38%       | 7,080,033     | 530              | 5,410            | 7,021,941       |
| FHLMC 0.875 7/19/2019                        | 3137EAE81 | 5,230,000    | 7/19/2019     | 7/26/2017       | 1.41%       | 5,176,079     | 565              | 20,593           | 5,148,203       |
| FHLMC 0.875 7/19/2019                        | 3137EAE81 | 6,720,000    | 7/19/2019     | 8/31/2017       | 1.36%       | 6,659,386     | 565              | 26,460           | 6,614,899       |
| FHLMC 1.375 8/15/2019                        | 3137EAEH8 | 5,215,000    | 8/15/2019     | 7/26/2017       | 1.45%       | 5,206,917     | 592              | 32,268           | 5,170,255       |
| FNMA 1 8/28/2019                             | 3135G0P49 | 6,715,000    | 8/28/2019     | 8/31/2017       | 1.39%       | 6,664,100     | 605              | 22,943           | 6,615,954       |
| FNMA 1.75 9/12/2019                          | 3135G0ZG1 | 4,705,000    | 9/12/2019     | 7/26/2017       | 1.45%       | 4,734,171     | 620              | 24,930           | 4,691,685       |
| FHLB 1 9/26/2019                             | 3130A9EP2 | 7,550,000    | 9/26/2019     | 8/31/2017       | 1.39%       | 7,490,053     | 634              | 19,924           | 7,434,334       |
| FHLMC 1.25 10/2/2019                         | 3137EADM8 | 5,045,000    | 10/2/2019     | 12/28/2017      | 1.93%       | 4,985,469     | 640              | 15,590           | 4,984,914       |

In addition to the totals listed above, there also exists surety bonds in the amount of \$331,914,579 as of December 31, 2017.



**Great Lakes Water Authority  
Portfolio Holdings  
As of December 31, 2017**

| DESCRIPTION                       | CUSIP     | PAR AMOUNT   | MATURITY DATE | SETTLEMENT DATE | YTM AT COST | ORIGINAL COST | DAYS TO MATURITY | ACCRUED INTEREST | TOTAL VALUE     |
|-----------------------------------|-----------|--------------|---------------|-----------------|-------------|---------------|------------------|------------------|-----------------|
| <b>Commercial Paper</b>           |           |              |               |                 |             |               |                  |                  |                 |
| Cooperatieve Rabobank 0 2/21/2018 | 21687BBM2 | \$ 4,100,000 | 2/21/2018     | 7/28/2017       | 1.40%       | \$ 4,067,783  | 52               | \$ -             | \$ 4,090,160.00 |
| Cooperatieve Rabobank 0 2/21/2018 | 21687BBM2 | 5,300,000    | 2/21/2018     | 7/28/2017       | 1.40%       | 5,258,354     | 52               | -                | 5,287,280       |
| Credit Agricole 0 3/23/2018       | 22533UCP6 | 1,598,000    | 3/23/2018     | 12/21/2017      | 1.64%       | 1,591,384     | 82               | -                | 1,591,992       |
| Toyota Motor Credit 0 3/23/2018   | 89233HCP7 | 1,655,000    | 3/23/2018     | 10/4/2017       | 1.43%       | 1,643,980     | 82               | -                | 1,648,777       |
| Toyota Motor Credit 0 3/23/2018   | 89233HCP7 | 1,711,000    | 3/23/2018     | 11/7/2017       | 1.40%       | 1,702,080     | 82               | -                | 1,704,567       |
| Bank of Tokyo 0 4/20/2018         | 06538CDL2 | 4,100,000    | 4/20/2018     | 7/26/2017       | 1.55%       | 4,053,606     | 110              | -                | 4,078,680       |
| JPMorgan Securities 0 4/20/2018   | 46640QDL2 | 4,100,000    | 4/20/2018     | 7/26/2017       | 1.54%       | 4,053,911     | 110              | -                | 4,077,860       |
| Bank of Tokyo 0 4/20/2018         | 06538CDL2 | 5,300,000    | 4/20/2018     | 7/26/2017       | 1.55%       | 5,240,028     | 110              | -                | 5,272,440       |
| JPMorgan Securities 0 4/20/2018   | 46640QDL2 | 5,300,000    | 4/20/2018     | 7/26/2017       | 1.54%       | 5,240,422     | 110              | -                | 5,271,380       |
| ING US Funding 0 5/2/2018         | 4497W1E28 | 692,000      | 5/2/2018      | 8/10/2017       | 1.54%       | 684,308       | 122              | -                | 688,007         |
| ING US Funding 0 5/2/2018         | 4497W1E28 | 3,468,000    | 5/2/2018      | 8/10/2017       | 1.54%       | 3,429,452     | 122              | -                | 3,447,990       |
| ING US Funding 0 5/2/2018         | 4497W1E28 | 2,922,000    | 5/2/2018      | 8/10/2017       | 1.54%       | 2,889,521     | 122              | -                | 2,905,140       |
| Credit Agricole 0 5/29/2018       | 22533UEV1 | 4,030,000    | 5/29/2018     | 12/28/2017      | 1.78%       | 4,000,053     | 149              | -                | 3,999,815       |
| Bank of Montreal 0 6/4/2018       | 06366HF44 | 639,000      | 6/4/2018      | 9/8/2017        | 1.51%       | 631,964       | 155              | -                | 633,977         |
| Bank of Montreal 0 6/4/2018       | 06366HF44 | 3,295,000    | 6/4/2018      | 9/8/2017        | 1.51%       | 3,258,719     | 155              | -                | 3,269,101       |
| Bank of Montreal 0 6/4/2018       | 06366HF44 | 982,000      | 6/4/2018      | 9/8/2017        | 1.51%       | 971,187       | 155              | -                | 974,281         |
| Bank of Montreal 0 6/4/2018       | 06366HF44 | 2,933,000    | 6/4/2018      | 9/8/2017        | 1.51%       | 2,900,705     | 155              | -                | 2,909,947       |
| Bank of Tokyo 0 6/22/2018         | 06538CFN6 | 2,029,000    | 6/22/2018     | 10/4/2017       | 1.63%       | 2,005,611     | 173              | -                | 2,011,165       |
| Bank of Tokyo 0 6/22/2018         | 06538CFN6 | 742,000      | 6/22/2018     | 10/4/2017       | 1.63%       | 733,447       | 173              | -                | 735,478         |
| BNP Paribas 0 6/22/2018           | 09659CFN3 | 692,000      | 6/22/2018     | 11/7/2017       | 1.63%       | 685,018       | 173              | -                | 685,917         |
| BNP Paribas 0 6/22/2018           | 09659CFN3 | 3,465,000    | 6/22/2018     | 11/7/2017       | 1.63%       | 3,430,042     | 173              | -                | 3,434,543       |
| JPMorgan Securities 0 6/22/2018   | 46640QFN6 | 691,000      | 6/22/2018     | 12/21/2017      | 1.92%       | 684,396       | 173              | -                | 684,926         |
| JPMorgan Securities 0 6/22/2018   | 46640QFN6 | 3,473,000    | 6/22/2018     | 12/21/2017      | 1.92%       | 3,439,810     | 173              | -                | 3,442,472       |
| JPMorgan Securities 0 6/22/2018   | 46640QFN6 | 1,627,000    | 6/22/2018     | 10/5/2017       | 1.62%       | 1,608,434     | 173              | -                | 1,612,699       |
| Bank of Tokyo 0 6/22/2018         | 06538CFN6 | 1,750,000    | 6/22/2018     | 10/4/2017       | 1.63%       | 1,729,827     | 173              | -                | 1,734,618       |
| Bank of Tokyo 0 6/22/2018         | 06538CFN6 | 479,000      | 6/22/2018     | 10/4/2017       | 1.63%       | 473,478       | 173              | -                | 474,790         |
| BNP Paribas 0 6/22/2018           | 09659CFN3 | 2,930,000    | 6/22/2018     | 11/7/2017       | 1.63%       | 2,900,440     | 173              | -                | 2,904,245       |
| BNP Paribas 0 6/22/2018           | 09659CFN3 | 492,000      | 6/22/2018     | 11/7/2017       | 1.63%       | 487,036       | 173              | -                | 487,675         |
| JPMorgan Securities 0 6/22/2018   | 46640QFN6 | 1,178,000    | 6/22/2018     | 10/5/2017       | 1.62%       | 1,164,558     | 173              | -                | 1,167,645       |
| JPMorgan Securities 0 6/22/2018   | 46640QFN6 | 489,000      | 6/22/2018     | 12/21/2017      | 1.92%       | 484,327       | 173              | -                | 484,702         |
| JPMorgan Securities 0 6/22/2018   | 46640QFN6 | 2,928,000    | 6/22/2018     | 12/21/2017      | 1.92%       | 2,900,018     | 173              | -                | 2,902,263       |
| JPMorgan Securities 0 6/29/2018   | 46640QFV8 | 196,000      | 6/29/2018     | 11/7/2017       | 1.64%       | 193,962       | 180              | -                | 194,207         |
| JPMorgan Securities 0 6/29/2018   | 46640QFV8 | 849,000      | 6/29/2018     | 11/7/2017       | 1.64%       | 840,170       | 180              | -                | 841,232         |
| Bank of Tokyo 0 9/17/2018         | 06538CJH5 | 123,000      | 9/17/2018     | 12/21/2017      | 1.97%       | 121,238       | 260              | -                | 121,246         |
| Bank of Tokyo 0 9/17/2018         | 06538CJH5 | 3,029,000    | 9/17/2018     | 12/21/2017      | 1.97%       | 2,985,610     | 260              | -                | 2,985,806       |

*In addition to the totals listed above, there also exists surety bonds in the amount of \$331,914,579 as of December 31, 2017.*



**Great Lakes Water Authority  
Portfolio Holdings  
As of December 31, 2017**

| DESCRIPTION            | CUSIP       | PAR AMOUNT | MATURITY DATE | SETTLEMENT DATE | YTM AT COST | ORIGINAL COST | DAYS TO MATURITY | ACCRUED INTEREST | TOTAL VALUE  |
|------------------------|-------------|------------|---------------|-----------------|-------------|---------------|------------------|------------------|--------------|
| <b>U.S. Treasuries</b> |             |            |               |                 |             |               |                  |                  |              |
| T-Note 1 3/15/2018     | 912828J68   | \$ 48,000  | 3/15/2018     | 11/7/2017       | 1.28%       | \$ 47,953     | 74               | \$ 142           | \$ 47,966.40 |
| T-Note 1 3/15/2018     | 912828J68   | 1,638,000  | 3/15/2018     | 6/6/2017        | 1.16%       | 1,635,953     | 74               | 4,842            | 1,636,853    |
| T-Note 1 3/15/2018     | 912828J68   | 1,502,000  | 3/15/2018     | 9/15/2017       | 1.15%       | 1,500,885     | 74               | 4,440            | 1,500,949    |
| T-Note 1 3/15/2018     | 912828J68   | 1,559,000  | 3/15/2018     | 6/6/2017        | 1.17%       | 1,556,929     | 74               | 4,608            | 1,557,909    |
| T-Bill 0 3/22/2018     | 912796NX3   | 40,000     | 3/22/2018     | 12/21/2017      | 1.34%       | 39,865        | 81               | -                | 39,881       |
| T-Bill 0 3/22/2018     | 912796NX3   | 30,000     | 3/22/2018     | 10/4/2017       | 1.16%       | 29,837        | 81               | -                | 29,911       |
| T-Note 0.75 3/31/2018  | 912828UU2   | 7,054,000  | 3/31/2018     | 8/9/2017        | 1.19%       | 7,034,161     | 90               | 13,372           | 7,043,066    |
| T-Note 0.75 3/31/2018  | 912828UU2   | 9,240,000  | 3/31/2018     | 8/9/2017        | 1.19%       | 9,214,013     | 90               | 17,515           | 9,225,678    |
| T-Note 1.125 6/15/2018 | 912828XF2-1 | 4,750,000  | 6/15/2018     | 8/9/2017        | 1.23%       | 4,745,732     | 166              | 2,349            | 4,742,590    |
| T-Note 1.125 6/15/2018 | 912828XF2-1 | 889,000    | 6/15/2018     | 10/3/2017       | 1.25%       | 888,201       | 166              | 440              | 887,613      |
| T-Note 1.125 6/15/2018 | 912828XF2-1 | 890,000    | 6/15/2018     | 9/7/2017        | 1.20%       | 889,513       | 166              | 440              | 888,612      |
| T-Note 1.125 6/15/2018 | 912828XF2-1 | 4,159,000  | 6/15/2018     | 8/8/2017        | 1.22%       | 4,155,588     | 166              | 2,057            | 4,152,512    |
| T-Note 1.125 6/15/2018 | 912828XF2-1 | 1,115,000  | 6/15/2018     | 12/4/2017       | 1.45%       | 1,113,084     | 166              | 551              | 1,113,261    |
| T-Note 1.125 6/15/2018 | 912828XF2-1 | 1,286,000  | 6/15/2018     | 11/10/2017      | 1.38%       | 1,284,091     | 166              | 636              | 1,283,994    |
| T-Note 1.125 6/15/2018 | 912828XF2-1 | 47,000     | 6/15/2018     | 12/21/2017      | 1.47%       | 46,923        | 166              | 23               | 46,927       |
| T-Note 1.125 6/15/2018 | 912828XF2-2 | 503,000    | 6/15/2018     | 12/4/2017       | 1.45%       | 502,135       | 166              | 249              | 502,215      |
| T-Note 1.125 6/15/2018 | 912828XF2-2 | 1,496,000  | 6/15/2018     | 9/15/2017       | 1.24%       | 1,494,714     | 166              | 740              | 1,493,666    |
| T-Note 1.125 6/15/2018 | 912828XF2-2 | 513,000    | 6/15/2018     | 11/10/2017      | 1.39%       | 512,198       | 166              | 254              | 512,200      |
| T-Note 1.125 6/15/2018 | 912828XF2-2 | 518,000    | 6/15/2018     | 10/4/2017       | 1.28%       | 517,454       | 166              | 256              | 517,192      |
| T-Note 1.125 6/15/2018 | 912828XF2-2 | 17,000     | 6/15/2018     | 12/21/2017      | 1.47%       | 16,972        | 166              | 8                | 16,973       |
| T-Note 1.125 6/15/2018 | 912828XF2-1 | 6,250,000  | 6/15/2018     | 8/9/2017        | 1.23%       | 6,244,385     | 166              | 3,091            | 6,240,250    |
| T-Note 1.125 6/15/2018 | 912828XF2-1 | 1,220,000  | 6/15/2018     | 10/3/2017       | 1.25%       | 1,218,904     | 166              | 603              | 1,218,097    |
| T-Note 1.125 6/15/2018 | 912828XF2-1 | 1,378,000  | 6/15/2018     | 12/4/2017       | 1.45%       | 1,375,632     | 166              | 681              | 1,375,850    |
| T-Note 1.125 6/15/2018 | 912828XF2-1 | 1,223,000  | 6/15/2018     | 9/7/2017        | 1.20%       | 1,222,331     | 166              | 605              | 1,221,092    |
| T-Note 1.125 6/15/2018 | 912828XF2-1 | 6,623,000  | 6/15/2018     | 8/8/2017        | 1.22%       | 6,617,567     | 166              | 3,275            | 6,612,668    |
| T-Note 1.125 6/15/2018 | 912828XF2-2 | 1,880,000  | 6/15/2018     | 11/10/2017      | 1.38%       | 1,877,209     | 166              | 930              | 1,877,067    |
| T-Note 1.125 6/15/2018 | 912828XF2-2 | 2,724,000  | 6/15/2018     | 9/15/2017       | 1.24%       | 2,721,659     | 166              | 1,347            | 2,719,751    |
| T-Note 1.125 6/15/2018 | 912828XF2-2 | 885,000    | 6/15/2018     | 11/10/2017      | 1.39%       | 883,617       | 166              | 438              | 883,619      |
| T-Note 1.125 6/15/2018 | 912828XF2-2 | 899,000    | 6/15/2018     | 12/4/2017       | 1.45%       | 897,455       | 166              | 445              | 897,598      |
| T-Note 1.125 6/15/2018 | 912828XF2-2 | 70,000     | 6/15/2018     | 12/21/2017      | 1.47%       | 69,885        | 166              | 35               | 69,891       |
| T-Note 1.125 6/15/2018 | 912828XF2-2 | 915,000    | 6/15/2018     | 10/4/2017       | 1.28%       | 914,035       | 166              | 452              | 913,573      |
| T-Note 1.125 6/15/2018 | 912828XF2-2 | 30,000     | 6/15/2018     | 12/21/2017      | 1.47%       | 29,951        | 166              | 15               | 29,953       |
| T-Note 1.375 6/30/2018 | 912828VK3-2 | 7,510,000  | 6/30/2018     | 7/26/2017       | 1.23%       | 7,519,974     | 181              | -                | 7,505,344    |
| T-Note 1.375 6/30/2018 | 912828VK3-2 | 7,960,000  | 6/30/2018     | 7/26/2017       | 1.23%       | 7,970,572     | 181              | -                | 7,955,065    |
| T-Note 0.625 6/30/2018 | 912828R93   | 745,000    | 6/30/2018     | 7/10/2017       | 1.11%       | 741,479       | 181              | -                | 741,916      |
| T-Note 1.375 6/30/2018 | 912828VK3-1 | 36,000     | 6/30/2018     | 7/19/2017       | 1.23%       | 36,049        | 181              | -                | 35,978       |
| T-Note 1.375 6/30/2018 | 912828VK3   | 88,000     | 6/30/2018     | 10/4/2017       | 1.30%       | 88,048        | 181              | -                | 87,945       |
| T-Note 1.375 6/30/2018 | 912828VK3   | 89,000     | 6/30/2018     | 12/21/2017      | 1.52%       | 88,930        | 181              | -                | 88,945       |

In addition to the totals listed above, there also exists surety bonds in the amount of \$331,914,579 as of December 31, 2017.



Great Lakes Water Authority  
Portfolio Holdings  
As of December 31, 2017

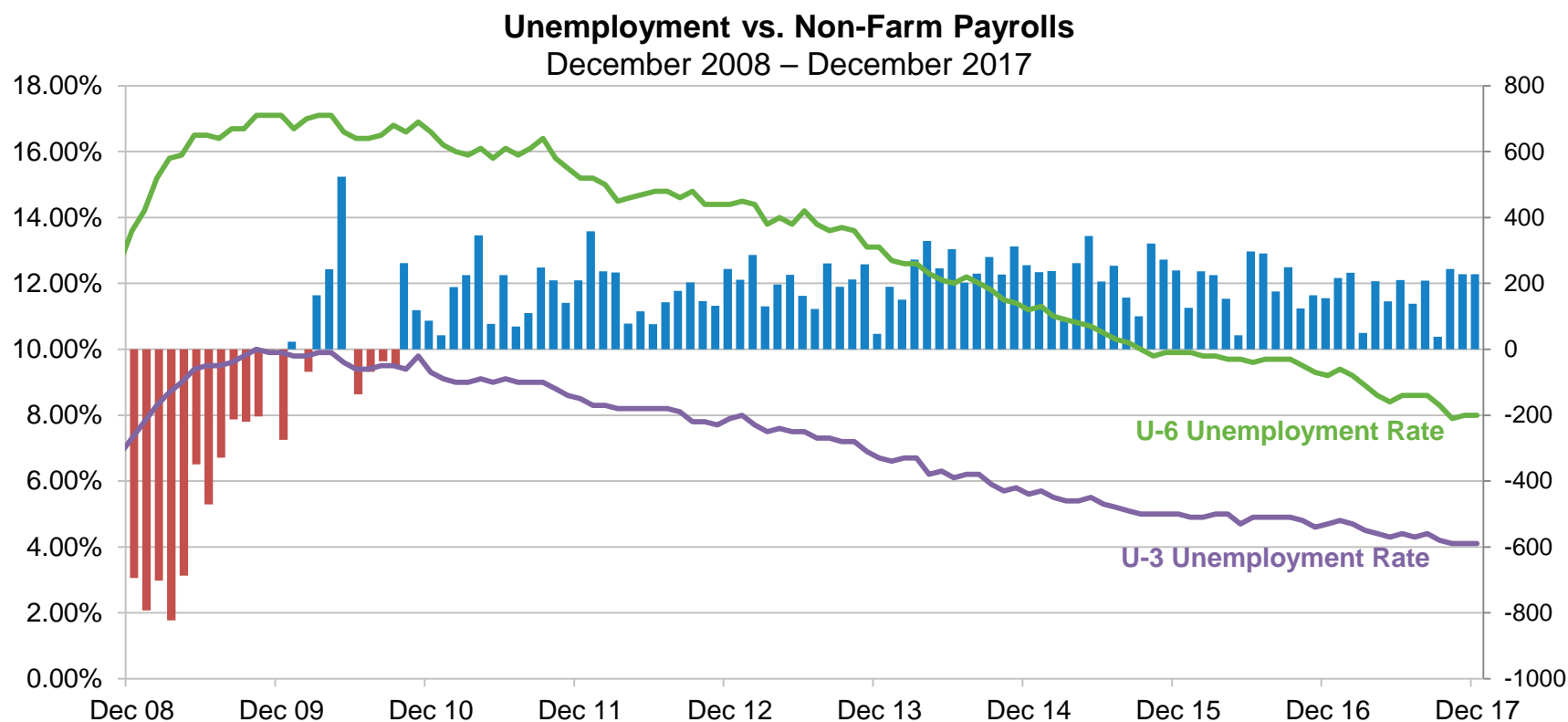
| DESCRIPTION             | CUSIP       | PAR AMOUNT | MATURITY DATE | SETTLEMENT DATE | YTM AT COST | ORIGINAL COST | DAYS TO MATURITY | ACCRUED INTEREST | TOTAL VALUE |
|-------------------------|-------------|------------|---------------|-----------------|-------------|---------------|------------------|------------------|-------------|
| <b>U.S. Treasuries</b>  |             |            |               |                 |             |               |                  |                  |             |
| T-Note 1.375 6/30/2018  | 912828VK3   | 188,000    | 6/30/2018     | 12/21/2017      | 1.52%       | 187,853       | 181              | -                | 187,883     |
| T-Note 1.375 6/30/2018  | 912828VK3   | 10,000     | 6/30/2018     | 10/4/2017       | 1.30%       | 10,005        | 181              | -                | 9,994       |
| T-Note 2.375 6/30/2018  | 912828QT0   | 42,000     | 6/30/2018     | 8/10/2017       | 1.24%       | 42,420        | 181              | -                | 42,177      |
| T-Note 0.625 6/30/2018  | 912828R93   | 2,705,000  | 6/30/2018     | 2/27/2017       | 0.98%       | 2,692,215     | 181              | -                | 2,693,801   |
| T-Note 0.625 6/30/2018  | 912828R93   | 57,000     | 6/30/2018     | 11/17/2017      | 1.46%       | 56,708        | 181              | -                | 56,764      |
| T-Note 1.375 6/30/2018  | 912828VK3-1 | 838,000    | 6/30/2018     | 7/19/2017       | 1.23%       | 839,146       | 181              | -                | 837,480     |
| T-Note 1.375 6/30/2018  | 912828VK3   | 881,000    | 6/30/2018     | 10/4/2017       | 1.30%       | 881,482       | 181              | -                | 880,454     |
| T-Note 1.375 6/30/2018  | 912828VK3   | 854,000    | 6/30/2018     | 12/21/2017      | 1.52%       | 853,333       | 181              | -                | 853,471     |
| T-Note 1.375 6/30/2018  | 912828VK3   | 780,000    | 6/30/2018     | 9/7/2017        | 1.22%       | 780,975       | 181              | -                | 779,516     |
| T-Note 2.375 6/30/2018  | 912828QT0   | 820,000    | 6/30/2018     | 8/10/2017       | 1.24%       | 828,200       | 181              | -                | 823,460     |
| T-Note 0.75 8/31/2018   | 912828C3    | 5,190,000  | 8/31/2018     | 7/26/2017       | 1.27%       | 5,160,806     | 243              | 13,118           | 5,158,393   |
| T-Note 0.75 8/31/2018   | 912828C3    | 6,650,000  | 8/31/2018     | 7/26/2017       | 1.27%       | 6,612,594     | 243              | 16,809           | 6,609,502   |
| T-Note 1 9/15/2018      | 912828L40   | 7,018,000  | 9/15/2018     | 11/8/2017       | 1.50%       | 6,988,393     | 258              | 20,744           | 6,984,033   |
| T-Note 1 9/15/2018      | 912828L40   | 121,000    | 9/15/2018     | 10/4/2017       | 1.36%       | 120,594       | 258              | 358              | 120,414     |
| T-Note 1 9/15/2018      | 912828L40   | 122,000    | 9/15/2018     | 11/7/2017       | 1.49%       | 121,490       | 258              | 361              | 121,410     |
| T-Note 1 9/15/2018      | 912828L40   | 9,525,000  | 9/15/2018     | 11/8/2017       | 1.50%       | 9,484,816     | 258              | 28,154           | 9,478,899   |
| T-Note 1 9/15/2018      | 912828L40   | 2,993,000  | 9/15/2018     | 10/4/2017       | 1.36%       | 2,982,945     | 258              | 8,847            | 2,978,514   |
| T-Note 1 9/15/2018      | 912828L40   | 2,994,000  | 9/15/2018     | 11/7/2017       | 1.49%       | 2,981,486     | 258              | 8,850            | 2,979,509   |
| T-Note 0.75 9/30/2018   | 912828T42   | 5,160,000  | 9/30/2018     | 7/26/2017       | 1.28%       | 5,128,355     | 273              | 9,781            | 5,123,312   |
| T-Note 0.75 9/30/2018   | 912828T42   | 6,605,000  | 9/30/2018     | 7/26/2017       | 1.28%       | 6,564,493     | 273              | 12,520           | 6,558,038   |
| T-Note 1.375 9/30/2018  | 912828RH5   | 10,220,000 | 9/30/2018     | 10/26/2016      | 0.87%       | 10,317,809    | 273              | 35,517           | 10,192,815  |
| T-Note 1.375 9/30/2018  | 912828RH5   | 7,805,000  | 9/30/2018     | 10/26/2016      | 0.87%       | 7,879,696     | 273              | 27,125           | 7,784,239   |
| T-Note 0.75 10/31/2018  | 912828T83   | 5,215,000  | 10/31/2018    | 7/26/2017       | 1.31%       | 5,178,536     | 304              | 6,591            | 5,172,028   |
| T-Note 0.75 10/31/2018  | 912828T83   | 4,275,000  | 10/31/2018    | 8/31/2017       | 1.26%       | 4,249,784     | 304              | 5,403            | 4,239,774   |
| T-Note 0.75 10/31/2018  | 912828T83   | 2,400,000  | 10/31/2018    | 7/26/2017       | 1.31%       | 2,383,219     | 304              | 3,033            | 2,380,224   |
| T-Note 1.375 11/30/2018 | 912828RT9   | 10,400,000 | 11/30/2018    | 7/26/2017       | 1.32%       | 10,407,313    | 334              | 12,179           | 10,361,416  |
| T-Note 1 11/30/2018     | 912828U40   | 13,370,000 | 11/30/2018    | 8/31/2017       | 1.26%       | 13,326,652    | 334              | 11,387           | 13,274,939  |
| T-Note 1.25 4/30/2019   | 912828ST8   | 5,225,000  | 4/30/2019     | 7/26/2017       | 1.37%       | 5,214,183     | 485              | 11,006           | 5,183,566   |
| T-Note 1.25 4/30/2019   | 912828ST8   | 6,680,000  | 4/30/2019     | 8/31/2017       | 1.31%       | 6,673,216     | 485              | 14,070           | 6,627,028   |
| T-Note 1.25 5/31/2019   | 912828XS4   | 5,180,000  | 5/31/2019     | 7/26/2017       | 1.37%       | 5,168,669     | 516              | 5,514            | 5,137,110   |
| T-Note 1.625 6/30/2019  | 912828WS5   | 146,000    | 6/30/2019     | 7/21/2017       | 1.35%       | 146,776       | 546              | -                | 145,492     |
| T-Note 1.625 6/30/2019  | 912828WS5   | 1,625,000  | 6/30/2019     | 2/27/2017       | 1.27%       | 1,638,267     | 546              | -                | 1,619,345   |
| T-Note 1.25 6/30/2019   | 912828XV7   | 5,800,000  | 6/30/2019     | 10/11/2017      | 1.49%       | 5,776,664     | 546              | -                | 5,748,554   |
| T-Note 1.625 6/30/2019  | 912828WS5   | 4,475,000  | 6/30/2019     | 2/10/2017       | 1.32%       | 4,506,989     | 546              | -                | 4,459,427   |
| T-Note 1.25 6/30/2019   | 912828XV7   | 10,150,000 | 6/30/2019     | 10/11/2017      | 1.49%       | 10,109,162    | 546              | -                | 10,059,970  |
| T-Note 1.625 6/30/2019  | 912828WS5   | 2,450,000  | 6/30/2019     | 2/27/2017       | 1.27%       | 2,470,002     | 546              | -                | 2,441,474   |
| T-Note 1.625 6/30/2020  | 912828XH8   | 9,705,000  | 6/30/2020     | 10/11/2017      | 1.61%       | 9,709,928     | 912              | -                | 9,633,377   |
| T-Note 1.625 6/30/2020  | 912828XH8   | 6,560,000  | 6/30/2020     | 10/11/2017      | 1.61%       | 6,563,331     | 912              | -                | 6,511,587   |
| T-Note 1.625 6/30/2020  | 912828XH8   | 4,565,000  | 6/30/2020     | 2/27/2017       | 1.54%       | 4,578,374     | 912              | -                | 4,531,310   |

In addition to the totals listed above, there also exists surety bonds in the amount of \$331,914,579 as of December 31, 2017.

# Appendix I: Economic Update

## U.S. Labor Market

- In December, nonfarm payrolls came in short of expectations, increasing by only 148,000
- The unemployment rate was unchanged at 4.1%, continuing the recent trend of lows for U.S. unemployment



Source: Bloomberg

## FOMC Statement Highlights

December

13

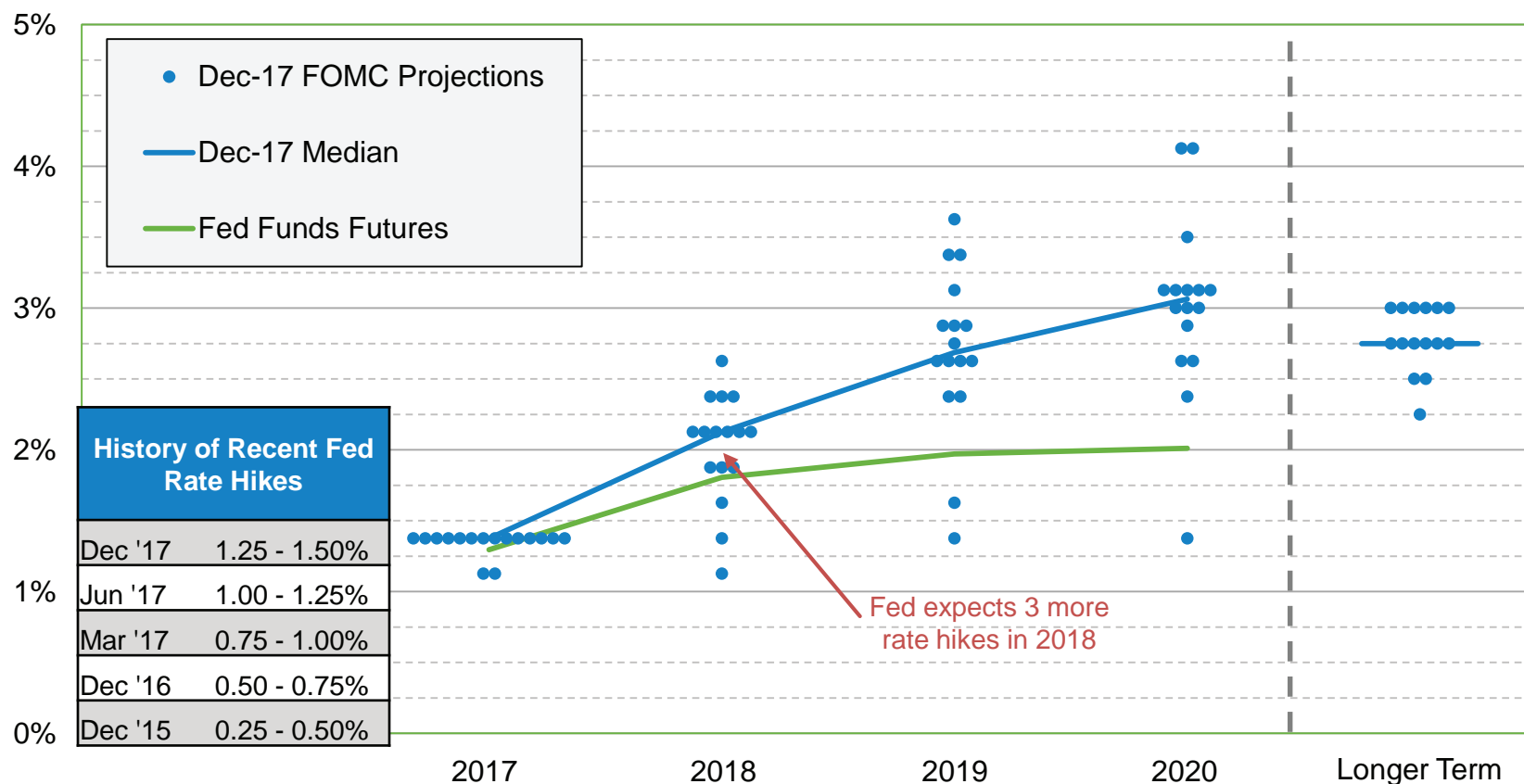
- Information received since the FOMC met in November indicates that the **labor market has continued to strengthen** and that **economic activity has been rising at a solid rate**. Averaging through hurricane-related fluctuations, **job gains have been solid, and the unemployment rate declined further**.
  - **Hurricane-related disruptions and rebuilding** have affected economic activity, employment, and inflation in recent months but **have not materially altered the outlook for the national economy**.
  - **Inflation on a 12-month basis is expected to remain somewhat below 2.0% in the near term** but to stabilize around the Committee's 2.0% objective over the medium term.
- 
- The Committee decided to **raise the target range for the Federal Funds rate to 1.25% to 1.50%**.
  - The Committee expects that economic conditions will evolve in a manner that will warrant **gradual increases in the Federal Funds rate**.
  - All voting members of the FOMC supported the monetary policy action, except for Charles Evans (Chicago) and Neel Kashkari (Minneapolis), who preferred at this meeting to maintain the existing target range for the Federal Funds rate.

Source: Federal Reserve



## FOMC “Dot Plot” – December 2017

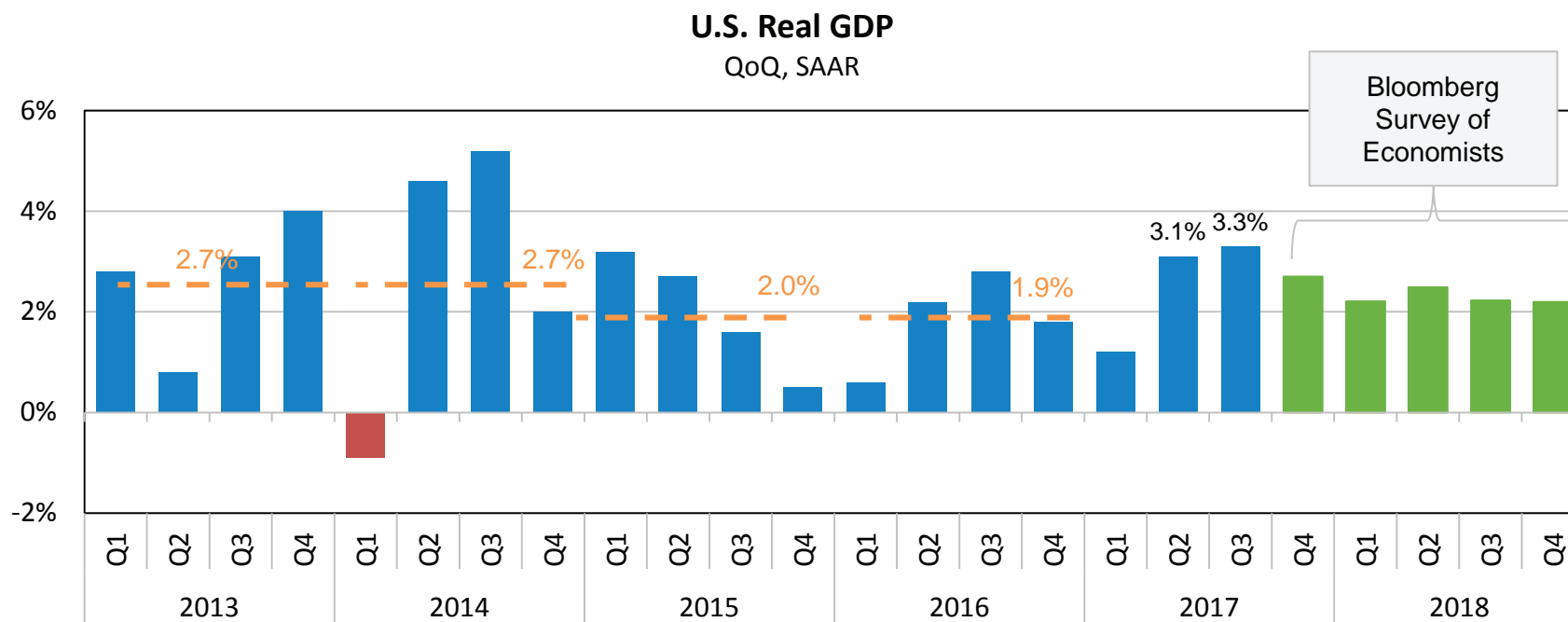
### Fed Participants’ Assessments of ‘Appropriate’ Monetary Policy



Source: Bloomberg

## Economic Growth Remained Strong in the 3<sup>rd</sup> Quarter

- Gross domestic product increased at an annualized rate of 3.3% in the third quarter of 2017, the fastest pace of expansion over two consecutive quarters since 2014; growth has averaged 2.4% over the last four quarters
- The acceleration in third quarter 2017 GDP reflected positive contributions from personal consumption, business investment, boosted primarily by a rise in private inventories, and exports which were offset by negative contributions from residential housing

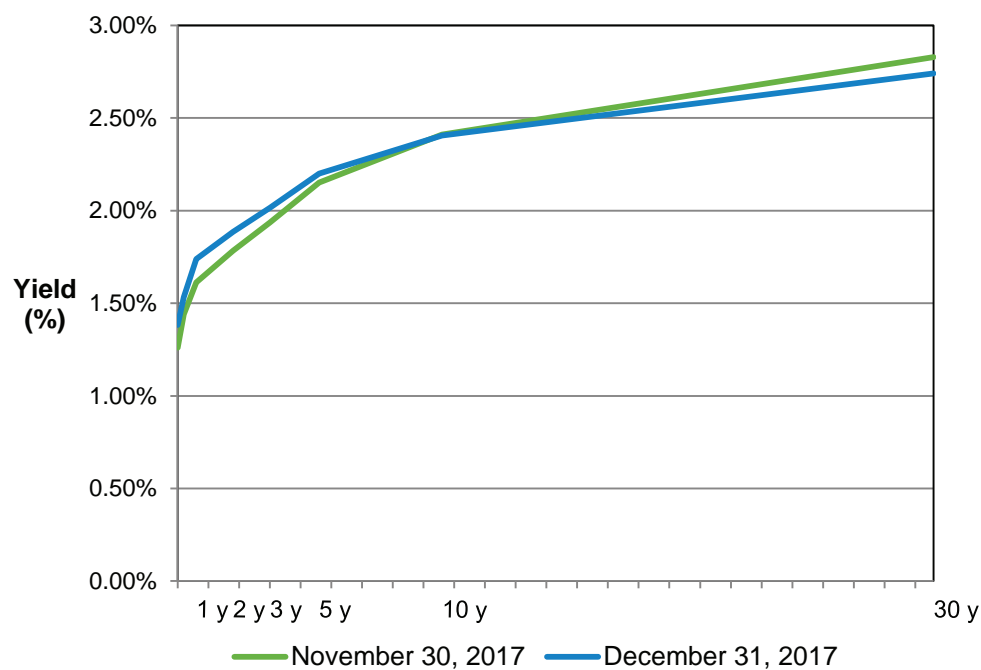


Source: Bloomberg

## U.S. Treasury Yields

### U.S. Treasury Yield Curve

November 30, 2017 vs. December 31, 2017



|         | 11/30/2017 | 12/31/2017 | Change |
|---------|------------|------------|--------|
| 3 month | 1.26%      | 1.38%      | 0.12%  |
| 6 month | 1.44%      | 1.53%      | 0.09%  |
| 1 year  | 1.61%      | 1.74%      | 0.13%  |
| 2 year  | 1.78%      | 1.89%      | 0.11%  |
| 3 year  | 1.94%      | 2.01%      | 0.07%  |
| 5 year  | 2.15%      | 2.20%      | 0.05%  |
| 10 year | 2.41%      | 2.41%      | 0.00%  |
| 30 year | 2.83%      | 2.74%      | -0.09% |

Source: Bloomberg

## Disclosure

*This material is based on information obtained from sources generally believed to be reliable and available to the public, however PFM Asset Management LLC cannot guarantee its accuracy, completeness or suitability. This material is for general information purposes only and is not intended to provide specific advice or a specific recommendation. All statements as to what will or may happen under certain circumstances are based on assumptions, some but not all of which are noted in the presentation. Assumptions may or may not be proven correct as actual events occur, and results may depend on events outside of your or our control. Changes in assumptions may have a material effect on results. Past performance does not necessarily reflect and is not a guaranty of future results. The information contained in this presentation is not an offer to purchase or sell any securities.*



## Financial Services Audit Committee Communication

**Date:** March 16, 2018  
**To:** Great Lakes Water Authority Audit Committee  
**From:** Jon Wheatley, Public Finance Manager  
**Re:** Monthly Revenue & Collections Report for January 2018

*The Monthly Revenue & Collections Report includes the following.*

1. FY 2018 Retail and Wholesale Sewer Revenue
2. FY 2018 Retail and Wholesale Water Revenue
3. City of Highland Park Billings and Collections
4. City of Flint Billings and Collections
5. Water & Sewer System Wholesale Accounts Receivable Aging Report

Note: Wholesale customer revenues are billed by the Great Lakes Water Authority (GLWA). Pursuant to the terms of the lease agreement between the City of Detroit and the Great Lakes Water Authority, the Detroit Water & Sewerage Department (DWSD) serves as GLWA's agent for billing activities for the City of Detroit retail customer class. All revenues collected by both GLWA and DWSD are deposited in a trust account in accordance with the GLWA Master Bond Ordinance.

### **1. FY 2018 Retail and Wholesale Sewer Revenue Report**

**Table 1** summarizes the unaudited FY 2018 billed revenues through January 31, 2018 and do not reflect collections of those revenues. It should also be noted that the revenues are shown in the month that the billed flow was accrued and not the following month when the bills are usually sent out to customers.

**Table 1 – Combined DWSD and GLWA Wholesale FY 2018 Sewer Revenue**

| <b>RETAIL SEWER CUSTOMERS</b>    |                         |                |                         |                |                 |                |
|----------------------------------|-------------------------|----------------|-------------------------|----------------|-----------------|----------------|
| <u>Month</u>                     | <b>FY 2018 - Budget</b> |                | <b>FY 2018 - Actual</b> |                | <b>Variance</b> |                |
|                                  | <u>Volume</u>           | <u>Revenue</u> | <u>Volume</u>           | <u>Revenue</u> | <u>Volume</u>   | <u>Revenue</u> |
|                                  | <i>Mcf</i>              | \$             | <i>Mcf</i>              | \$             | <i>Mcf</i>      | \$             |
| July                             | 260,000                 | 24,615,100     | 244,512                 | 24,624,820     | (15,488)        | 9,720          |
| August                           | 260,600                 | 24,754,400     | 239,911                 | 24,348,011     | (20,689)        | (406,389)      |
| September                        | 222,800                 | 22,752,800     | 228,122                 | 23,517,204     | 5,322           | 764,404        |
| October                          | 205,500                 | 22,717,800     | 224,159                 | 23,573,505     | 18,659          | 855,705        |
| November                         | 189,900                 | 21,987,300     | 188,312                 | 22,084,385     | (1,588)         | 97,085         |
| December                         | 204,400                 | 22,774,800     | 190,811                 | 21,937,291     | (13,589)        | (837,509)      |
| January                          | 195,300                 | 22,296,100     | 213,373                 | 22,944,848     | 18,073          | 648,748        |
| February                         | 198,300                 | 23,060,600     | -                       | -              | -               | -              |
| March                            | 203,000                 | 23,026,900     | -                       | -              | -               | -              |
| April                            | 189,300                 | 22,215,900     | -                       | -              | -               | -              |
| May                              | 219,400                 | 23,798,700     | -                       | -              | -               | -              |
| June                             | 251,500                 | 24,635,500     | -                       | -              | -               | -              |
| <b>Total</b>                     | 2,600,000               | 278,635,900    | 1,529,199               | 163,030,064    | (9,301)         | 1,131,764      |
| <b>Subtotals ytd</b>             | 1,538,500               | 161,898,300    | 1,529,199               | 163,030,064    | (9,301)         | 1,131,764      |
| <i>Achievement of Budget</i>     |                         |                | 99.40%                  | 100.70%        |                 |                |
| <b>WHOLESALE SEWER CUSTOMERS</b> |                         |                |                         |                |                 |                |
| <u>Month</u>                     | <b>FY 2018 - Budget</b> |                | <b>FY 2018 - Actual</b> |                | <b>Variance</b> |                |
|                                  | <u>Volume</u>           | <u>Revenue</u> | <u>Volume</u>           | <u>Revenue</u> | <u>Volume</u>   | <u>Revenue</u> |
|                                  | <i>Mcf</i>              | \$             | <i>Mcf</i>              | \$             | <i>Mcf</i>      | \$             |
| July                             | N/A                     | 22,619,300     | N/A                     | 22,619,300     | N/A             | -              |
| August                           | N/A                     | 22,619,300     | N/A                     | 22,619,300     | N/A             | -              |
| September                        | N/A                     | 22,619,300     | N/A                     | 22,619,300     | N/A             | -              |
| October                          | N/A                     | 22,619,300     | N/A                     | 22,619,300     | N/A             | -              |
| November                         | N/A                     | 22,619,300     | N/A                     | 22,619,300     | N/A             | -              |
| December                         | N/A                     | 22,619,300     | N/A                     | 22,619,300     | N/A             | -              |
| January                          | N/A                     | 22,619,300     | N/A                     | 22,619,300     | N/A             | -              |
| February                         | N/A                     | 22,619,300     | N/A                     | -              | N/A             | -              |
| March                            | N/A                     | 22,619,300     | N/A                     | -              | N/A             | -              |
| April                            | N/A                     | 22,619,300     | N/A                     | -              | N/A             | -              |
| May                              | N/A                     | 22,619,300     | N/A                     | -              | N/A             | -              |
| June                             | N/A                     | 22,619,300     | N/A                     | -              | N/A             | -              |
| <b>Total</b>                     |                         | 271,431,600    |                         | 158,335,100    |                 | 0              |
| <b>Subtotals ytd</b>             |                         | 158,335,100    |                         | 158,335,100    |                 | 0              |
| <i>Achievement of Budget</i>     |                         |                |                         | 100.00%        |                 |                |
| <b>TOTAL - ALL CUSTOMERS</b>     |                         |                |                         |                |                 |                |
| <u>Month</u>                     | <b>FY 2018 - Budget</b> |                | <b>FY 2018 - Actual</b> |                | <b>Variance</b> |                |
|                                  | <u>Volume</u>           | <u>Revenue</u> | <u>Volume</u>           | <u>Revenue</u> | <u>Volume</u>   | <u>Revenue</u> |
|                                  | <i>Mcf</i>              | \$             | <i>Mcf</i>              | \$             | <i>Mcf</i>      | \$             |
| July                             | 260,000                 | 47,234,400     | 244,512                 | 47,244,120     | (15,488)        | 9,720          |
| August                           | 260,600                 | 47,373,700     | 239,911                 | 46,967,311     | (20,689)        | (406,389)      |
| September                        | 222,800                 | 45,372,100     | 228,122                 | 46,136,504     | 5,322           | 764,404        |
| October                          | 205,500                 | 45,337,100     | 224,159                 | 46,192,805     | 18,659          | 855,705        |
| November                         | 189,900                 | 44,606,600     | 188,312                 | 44,703,685     | (1,588)         | 97,085         |
| December                         | 204,400                 | 45,394,100     | 190,811                 | 44,556,591     | (13,589)        | (837,509)      |
| January                          | 195,300                 | 44,915,400     | 213,373                 | 45,564,148     | 18,073          | 648,748        |
| February                         | 198,300                 | 45,679,900     | -                       | -              | -               | -              |
| March                            | 203,000                 | 45,646,200     | -                       | -              | -               | -              |
| April                            | 189,300                 | 44,835,200     | -                       | -              | -               | -              |
| May                              | 219,400                 | 46,418,000     | -                       | -              | -               | -              |
| June                             | 251,500                 | 47,254,800     | -                       | -              | -               | -              |
| <b>Total</b>                     | 2,600,000               | 550,067,500    | 1,529,199               | 321,365,164    | (9,301)         | 1,131,764      |
| <b>Subtotals ytd</b>             | 1,538,500               | 320,233,400    | 1,529,199               | 321,365,164    | (9,301)         | 1,131,764      |
| <i>Achievement of Budget</i>     |                         |                | 99.40%                  | 100.35%        |                 |                |



**DWSD Retail Billings:** Table 1 shows the FY 2018 sewer usage and billed revenue which are provided by DWSD staff. As of January 31, 2018, the DWSD usage was at 99.40% of the budget and billed revenue was at 100.70% of budget.

**GLWA Wholesale Customer Billings:** Table 1 shows the FY 2018 sewer billed revenue. As a result of the sewer rate simplification which provides a more stable revenue stream, the wholesale sewer customers are billed a fixed monthly fee. The results of this effort can be seen as the billed revenue is at 100.0% of budget through January 2018.

**Total System Billings:** Table 1 shows the FY 2018 combined DWSD and GLWA Wholesale sewer billed usage and billed revenue. Based on the combined, the GLWA Sewer System had billed revenues of 100.35% of budget based upon the most current information available as of this report.

## **2. FY 2018 Retail and Wholesale Water Revenue Report**

**Table 2** summarizes the unaudited FY 2018 wholesale customer water revenues billed by GLWA and the retail water revenues billed by DWSD. Please note these are billed revenues and do not reflect collections of those revenues. It should also be noted that the revenues are shown in the month that the billed flow was accrued and not the following month when the bills are usually sent out.

**Table 2 – Combined DWSD and GLWA Wholesale FY 2018 Water Revenue Report**

| RETAIL WATER CUSTOMERS                                |                  |             |              |                  |             |              |          |             |
|---|------------------|-------------|--------------|------------------|-------------|--------------|----------|-------------|
| Month   | FY 2018 - Budget |             |              | FY 2018 - Actual |             |              | Variance |             |
|   | Volume           | Revenue     | Unit Revenue | Volume           | Revenue     | Unit Revenue | Volume   | Revenue     |
|   | Mcf              | \$          | \$/Mcf       | Mcf              | \$          | \$/Mcf       | Mcf      | \$          |
| July  | 295,700          | 9,332,300   | 31.56        | 274,267          | 8,813,936   | 32.14        | (21,433) | (518,364)   |
| August  | 303,100          | 9,517,000   | 31.40        | 269,802          | 8,631,595   | 31.99        | (33,298) | (885,405)   |
| September   | 248,900          | 8,393,900   | 33.72        | 259,341          | 8,463,041   | 32.63        | 10,441   | 69,141      |
| October   | 236,100          | 7,947,500   | 33.66        | 247,700          | 8,187,943   | 33.06        | 11,600   | 240,443     |
| November  | 218,400          | 7,585,100   | 34.73        | 208,783          | 7,276,521   | 34.85        | (9,617)  | (308,579)   |
| December  | 238,500          | 8,008,200   | 33.58        | 213,026          | 7,333,094   | 34.42        | (25,474) | (675,106)   |
| January   | 224,700          | 7,673,100   | 34.15        | 235,142          | 7,873,651   | 33.48        | 10,442   | 200,551     |
| February  | 224,700          | 7,813,100   | 34.77        | -                | -           | -            | -        | -           |
| March   | 235,700          | 7,944,800   | 33.71        | -                | -           | -            | -        | -           |
| April   | 217,700          | 7,529,200   | 34.59        | -                | -           | -            | -        | -           |
| May   | 256,700          | 8,946,300   | 34.85        | -                | -           | -            | -        | -           |
| June  | 284,800          | 9,089,900   | 31.92        | -                | -           | -            | -        | -           |
| Total   | 2,985,000        | 99,780,400  | 33.43        | 1,708,061        | 56,579,780  | 33.13        | (57,339) | (1,877,320) |
| Subtotals ytd   | 1,765,400        | 58,457,100  | 33.11        | 1,708,061        | 56,579,780  | 33.13        | (57,339) | (1,877,320) |
| Achievement of Budget                                 |                  |             |              | 96.75%           | 96.79%      |              |          |             |
| WHOLESALE WATER CUSTOMERS*                            |                  |             |              |                  |             |              |          |             |
| Month   | FY 2018 - Budget |             |              | FY 2018 - Actual |             |              | Variance |             |
|   | Volume           | Revenue     | Unit Revenue | Volume           | Revenue     | Unit Revenue | Volume   | Revenue     |
|   | Mcf              | \$          | \$/Mcf       | Mcf              | \$          | \$/Mcf       | Mcf      | \$          |
| July  | 1,712,100        | 31,705,800  | 18.52        | 1,721,500        | 32,819,241  | 19.06        | 9,400    | 1,113,441   |
| August  | 1,615,000        | 30,914,600  | 19.14        | 1,573,478        | 31,520,853  | 20.03        | (41,522) | 606,253     |
| September   | 1,420,900        | 28,619,700  | 20.14        | 1,421,715        | 29,686,522  | 20.88        | 815      | 1,066,822   |
| October   | 1,064,900        | 25,002,100  | 23.48        | 1,158,883        | 26,949,856  | 23.26        | 93,983   | 1,947,756   |
| November  | 892,000          | 23,038,000  | 25.83        | 958,686          | 25,146,717  | 26.23        | 66,686   | 2,108,717   |
| December  | 946,600          | 23,392,700  | 24.71        | 1,024,164        | 24,434,241  | 23.86        | 77,564   | 1,041,541   |
| January   | 972,400          | 23,676,000  | 24.35        | 1,067,591        | 24,810,289  | 23.24        | 95,191   | 1,134,289   |
| February  | 893,000          | 23,017,200  | 25.78        | -                | -           | -            | -        | -           |
| March   | 988,100          | 23,781,500  | 24.07        | -                | -           | -            | -        | -           |
| April   | 997,900          | 23,859,300  | 23.91        | -                | -           | -            | -        | -           |
| May   | 1,155,100        | 25,576,800  | 22.14        | -                | -           | -            | -        | -           |
| June  | 1,472,900        | 28,727,800  | 19.50        | -                | -           | -            | -        | -           |
| Total   | 14,130,900       | 311,311,500 | 22.03        | 8,926,017        | 195,367,718 | 21.89        | 302,117  | 9,018,818   |
| Subtotals ytd   | 8,623,900        | 186,348,900 | 21.61        | 8,926,017        | 195,367,718 | 21.89        | 302,117  | 9,018,818   |
| Achievement of Budget                                 |                  |             |              | 103.50%          | 104.84%     |              |          |             |
| * Includes Revenues and Usage from the City of Flint. |                  |             |              |                  |             |              |          |             |
| TOTAL - ALL CUSTOMERS                                 |                  |             |              |                  |             |              |          |             |
| Month   | FY 2018 - Budget |             |              | FY 2018 - Actual |             |              | Variance |             |
|   | Volume           | Revenue     | Unit Revenue | Volume           | Revenue     | Unit Revenue | Volume   | Revenue     |
|   | Mcf              | \$          | \$/Mcf       | Mcf              | \$          | \$/Mcf       | Mcf      | \$          |
| July  | 2,007,800        | 41,038,100  | 20.44        | 1,995,768        | 41,633,177  | 20.86        | (12,032) | 595,077     |
| August  | 1,918,100        | 40,431,600  | 21.08        | 1,843,280        | 40,152,447  | 21.78        | (74,820) | (279,153)   |
| September   | 1,669,800        | 37,013,600  | 22.17        | 1,681,056        | 38,149,562  | 22.69        | 11,256   | 1,135,962   |
| October   | 1,301,000        | 32,949,600  | 25.33        | 1,406,583        | 35,137,799  | 24.98        | 105,583  | 2,188,199   |
| November  | 1,110,400        | 30,623,100  | 27.58        | 1,167,469        | 32,423,237  | 27.77        | 57,069   | 1,800,137   |
| December  | 1,185,100        | 31,400,900  | 26.50        | 1,237,190        | 31,767,335  | 25.68        | 52,090   | 366,435     |
| January   | 1,197,100        | 31,349,100  | 26.19        | 1,302,733        | 32,683,940  | 25.09        | 105,633  | 1,334,840   |
| February  | 1,117,700        | 30,830,300  | 27.58        | -                | -           | -            | -        | -           |
| March   | 1,223,800        | 31,726,300  | 25.92        | -                | -           | -            | -        | -           |
| April   | 1,215,600        | 31,388,500  | 25.82        | -                | -           | -            | -        | -           |
| May   | 1,411,800        | 34,523,100  | 24.45        | -                | -           | -            | -        | -           |
| June  | 1,757,700        | 37,817,700  | 21.52        | -                | -           | -            | -        | -           |
| Total   | 17,115,900       | 411,091,900 | 24.02        | 10,634,079       | 251,947,498 | 23.69        | 244,779  | 7,141,498   |
| Subtotals ytd   | 10,389,300       | 244,806,000 | 23.56        | 10,634,079       | 251,947,498 | 23.69        | 244,779  | 7,141,498   |
| Achievement of Budget                                 |                  |             |              | 102.36%          | 102.92%     |              |          |             |

**DWSD Retail Billings:** **Table 2** shows the FY 2018 water billed usage and billed revenue which are provided by the DWSD staff. As of January 31, 2018, the DWSD usage was at 96.75% of budget and billed revenue was at 96.79% of budget.

**GLWA Wholesale Customer Billings:** **Table 2** shows the FY 2018 water billed usage and billed revenues. Starting FY 2016, wholesale water charges were re-structured to create a more stable revenue stream by using a historical rolling average to project customer volumes and allocating 60% of the customer revenue requirement to the monthly fixed charge. As of January 31, 2018, the billed usage was at 103.50% of budget and billed revenue at 104.84% of budget. As noted in **Table 2**, revenues and usage from the City of Flint *are* included as they were assumed in the FY 2018 Budget.

**Total System Billings:** **Table 2** shows the FY 2018 combined DWSD and GLWA Wholesale water billed usage and billed revenue. Based on the combined Retail and Wholesale Water billings, the GLWA Water System had billed usage of 102.36% of budget and billed revenues of 102.92% of budget based upon the most current information available as of this report.

### 3. City of Highland Park Billings and Collections

As of February 28, 2018, Highland Park had a delinquent balance of \$37.5 million, including \$30.2 million for wastewater treatment services, almost \$1.6 million for industrial waste control services, and almost \$5.7 million for water supply services. **Table 3** provides a summary of the billing and collection history for Highland Park from June 30, 2012 to February 28, 2018 in the table below. Please note the numbers below reflect the month the invoice was sent and not the month the service was provided.

**Table 3 - City of Highland Park Billings and Collections**

|  | <u>Water</u>               | <u>Sewer</u>                | <u>IWC</u>                 | <u>Cumulative<br/>Total</u> |
|--|----------------------------|-----------------------------|----------------------------|-----------------------------|
| June 30, 2012 Balance                  | \$ -                       | \$ 10,207,956               | \$ 852,987                 | \$ 11,060,943               |
| FY 2013 Billings                       | 485,887                    | 4,987,635                   | 154,444                    | 5,627,966                   |
| FY 2013 Payments                       | <u>(65,652)</u>            | <u>(2,206,211)</u>          | <u>-</u>                   | <u>(2,271,863)</u>          |
| June 30, 2013 Balance                  | \$ 420,235                 | \$ 12,989,380               | \$ 1,007,431               | \$ 14,417,046               |
| FY 2014 Billings                       | 1,004,357                  | 6,980,442                   | 161,951                    | 8,146,750                   |
| FY 2014 Payments                       | <u>-</u>                   | <u>(1,612,633)</u>          | <u>-</u>                   | <u>(1,612,633)</u>          |
| June 30, 2014 Balance                  | \$ 1,424,592               | \$ 18,357,189               | \$ 1,169,382               | \$ 20,951,163               |
| FY 2015 Billings                       | 1,008,032                  | 5,553,123                   | 165,739                    | 6,726,894                   |
| FY 2015 Payments                       | <u>-</u>                   | <u>(1,444,623)</u>          | <u>-</u>                   | <u>(1,444,623)</u>          |
| June 30, 2015 Balance                  | \$ 2,432,625               | \$ 22,465,689               | \$ 1,335,121               | \$ 26,233,435               |
| FY 2016 Billings                       | 1,157,178                  | 5,612,167                   | 106,431                    | 6,875,776                   |
| FY 2016 Payments                       | <u>-</u>                   | <u>(2,022,335)</u>          | <u>-</u>                   | <u>(2,022,335)</u>          |
| June 30, 2016 Balance                  | \$ 3,589,803               | \$ 26,055,521               | \$ 1,441,551               | \$ 31,086,875               |
| FY 2017 Billings                       | 1,245,267                  | 5,802,000                   | 101,999                    | 7,149,265                   |
| FY 2017 Payments                       | <u>-</u>                   | <u>(2,309,186)</u>          | <u>-</u>                   | <u>(2,309,186)</u>          |
| June 30, 2017 Balance                  | \$ 4,835,070               | \$ 29,548,335               | \$ 1,543,550               | \$ 35,926,954               |
| FY 2018 Billings (8 Months)            | 865,229                    | 3,776,300                   | 54,185                     | 4,695,715                   |
| FY 2018 Payments (8 Months)            | <u>-</u>                   | <u>(3,111,091)</u>          | <u>-</u>                   | <u>(3,111,091)</u>          |
| <b>Balance as of February 28, 2018</b> | <b><u>\$ 5,700,299</u></b> | <b><u>\$ 30,213,543</u></b> | <b><u>\$ 1,597,735</u></b> | <b><u>\$ 37,511,578</u></b> |

#### 4. Water & Sewer System Wholesale Accounts Receivable Aging Report

**Table 4** is a summary of the total, current and non-current receivables by category as of February 28, 2018. **Table 5** is the same summary *without* the past due balances for the City of Highland Park. The detailed accounts receivable aging is attached to this report. This report reflects the wholesale receivables only and do not include DWSD. (Note: percentages vary from 100% due to rounding.)

**Table 4 - Wholesale Accounts Receivable Aging Report**

|                            | <b>Total</b>            | <b>Current</b>          | <b>46-74 Days</b>      | <b>75-104 Days</b>   | <b>&gt;105 Days</b>     |
|----------------------------|-------------------------|-------------------------|------------------------|----------------------|-------------------------|
| <b>Water</b>               | \$ 40,456,466.06        | \$ 34,634,113.78        | \$ 524,759.34          | \$ 15,708.69         | \$ 5,281,884.25         |
| <b>Sewer</b>               | \$ 43,174,043.78        | \$ 13,430,699.50        | \$ 470,200.00          | \$ 470,200.00        | \$ 28,802,944.28        |
| <b>IWC</b>                 | \$ 2,929,761.53         | \$ 1,075,272.58         | \$ (169.98)            | \$ 129,631.80        | \$ 1,725,027.13         |
| <b>Pollutant Surcharge</b> | \$ 731,166.00           | \$ 471,496.38           | \$ 40,681.37           | \$ 46,376.66         | \$ 172,611.59           |
| <b>Total</b>               | <u>\$ 87,291,437.37</u> | <u>\$ 49,611,582.24</u> | <u>\$ 1,035,470.73</u> | <u>\$ 661,917.15</u> | <u>\$ 35,982,467.25</u> |
|                            | <u>100.00%</u>          | <u>56.83%</u>           | <u>1.19%</u>           | <u>0.76%</u>         | <u>41.22%</u>           |

**Table 5 - Wholesale Accounts Receivable Aging Report, Net of Highland Park**

|                            | <b>Total</b>            | <b>Current</b>          | <b>46-74 Days</b>    | <b>75-104 Days</b>  | <b>&gt;105 Days</b>  |
|----------------------------|-------------------------|-------------------------|----------------------|---------------------|----------------------|
| <b>Water</b>               | \$ 34,756,166.42        | \$ 34,430,419.07        | \$ 418,717.81        | \$ (92,970.46)      | \$ -                 |
| <b>Sewer</b>               | \$ 12,960,499.50        | \$ 12,960,499.50        | \$ -                 | \$ -                | \$ -                 |
| <b>IWC</b>                 | \$ 1,332,026.04         | \$ 1,062,089.30         | \$ (169.98)          | \$ 116,255.40       | \$ 153,851.32        |
| <b>Pollutant Surcharge</b> | \$ 731,166.00           | \$ 471,496.38           | \$ 40,681.37         | \$ 46,376.66        | \$ 172,611.59        |
| <b>Total</b>               | <u>\$ 49,779,857.96</u> | <u>\$ 48,924,504.25</u> | <u>\$ 459,229.20</u> | <u>\$ 69,661.60</u> | <u>\$ 326,462.91</u> |
|                            | <u>100.00%</u>          | <u>98.28%</u>           | <u>0.92%</u>         | <u>0.14%</u>        | <u>0.66%</u>         |

# GLWA Aged Accounts Receivable- Water Accounts

Balances as of 2/28/2018

| Customer Name         | Total Due      | Current        | 46 - 74 Days | 75 - 104 Days  | >105 Days |
|-----------------------|----------------|----------------|--------------|----------------|-----------|
| ALLEN PARK            | \$397,220.43   | \$397,220.43   | \$0.00       | \$0.00         | \$0.00    |
| ASH TOWNSHIP          | \$61,255.05    | \$61,255.05    | \$0.00       | \$0.00         | \$0.00    |
| BELLEVILLE            | \$25,315.90    | \$25,315.90    | \$0.00       | \$0.00         | \$0.00    |
| BERLIN TOWNSHIP       | \$57,635.45    | \$57,635.45    | \$0.00       | \$0.00         | \$0.00    |
| BROWNSTOWN TOWNSHIP   | \$274,667.88   | \$274,667.88   | \$0.00       | \$0.00         | \$0.00    |
| BRUCE TOWNSHIP        | \$25,552.66    | \$25,552.66    | \$0.00       | \$0.00         | \$0.00    |
| BURTCHVILLE TOWNSHIP  | \$23,003.14    | \$23,003.14    | \$0.00       | \$0.00         | \$0.00    |
| CANTON TOWNSHIP       | \$1,020,264.72 | \$1,020,264.72 | \$0.00       | \$0.00         | \$0.00    |
| CENTER LINE           | \$38,405.50    | \$38,405.50    | \$0.00       | \$0.00         | \$0.00    |
| CHESTERFIELD TOWNSHIP | \$615,391.49   | \$615,391.49   | \$0.00       | \$0.00         | \$0.00    |
| CLINTON TOWNSHIP      | \$627,991.12   | \$627,991.12   | \$0.00       | \$0.00         | \$0.00    |
| COMMERCE TOWNSHIP     | \$378,113.16   | \$378,113.16   | \$0.00       | \$0.00         | \$0.00    |
| DEARBORN              | \$1,685,396.97 | \$1,685,396.97 | \$0.00       | \$0.00         | \$0.00    |
| DEARBORN HEIGHTS      | \$313,769.91   | \$313,769.91   | \$0.00       | \$0.00         | \$0.00    |
| EASTPOINTE            | \$134,315.10   | \$134,315.10   | \$0.00       | \$0.00         | \$0.00    |
| ECORSE                | \$119,649.78   | \$119,649.78   | \$0.00       | \$0.00         | \$0.00    |
| FARMINGTON            | \$80,188.27    | \$80,188.27    | \$0.00       | \$0.00         | \$0.00    |
| FARMINGTON HILLS      | \$693,570.33   | \$693,570.33   | \$0.00       | \$0.00         | \$0.00    |
| FERNDAL               | \$165,688.03   | \$165,688.03   | \$0.00       | \$0.00         | \$0.00    |
| FLAT ROCK             | \$97,872.02    | \$97,872.02    | \$0.00       | \$0.00         | \$0.00    |
| FLINT                 | \$575,292.67   | \$270,905.40   | \$397,357.73 | \$ (92,970.46) | \$0.00    |
| FRASER                | \$105,486.35   | \$105,486.35   | \$0.00       | \$0.00         | \$0.00    |
| GARDEN CITY           | \$137,850.45   | \$137,850.45   | \$0.00       | \$0.00         | \$0.00    |

# GLWA Aged Accounts Receivable- Water Accounts

Balances as of 2/28/2018

| Customer Name             | Total Due      | Current        | 46 - 74 Days | 75 - 104 Days | >105 Days      |
|---------------------------|----------------|----------------|--------------|---------------|----------------|
| GENESEE COUNTY DRAIN COMM | \$0.00         | \$0.00         | \$0.00       | \$0.00        | \$0.00         |
| GIBRALTAR                 | \$38,106.17    | \$38,106.17    | \$0.00       | \$0.00        | \$0.00         |
| GREENWOOD TOWNSHIP        | \$28,337.90    | \$28,337.90    | \$0.00       | \$0.00        | \$0.00         |
| GROSSE ILE TOWNSHIP       | \$99,178.22    | \$99,178.22    | \$0.00       | \$0.00        | \$0.00         |
| GROSSE POINTE PARK        | \$219,368.39   | \$219,368.39   | \$0.00       | \$0.00        | \$0.00         |
| GROSSE POINTE SHORES      | \$44,684.67    | \$44,684.67    | \$0.00       | \$0.00        | \$0.00         |
| GROSSE POINTE WOODS       | \$123,546.74   | \$123,546.74   | \$0.00       | \$0.00        | \$0.00         |
| HAMTRAMCK                 | \$60,326.91    | \$60,326.91    | \$0.00       | \$0.00        | \$0.00         |
| HARPER WOODS              | \$73,046.06    | \$73,046.06    | \$0.00       | \$0.00        | \$0.00         |
| HARRISON TWP              | \$117,904.78   | \$117,904.78   | \$0.00       | \$0.00        | \$0.00         |
| HAZEL PARK                | \$60,372.87    | \$60,372.87    | \$0.00       | \$0.00        | \$0.00         |
| HIGHLAND PARK             | \$5,700,299.64 | \$203,694.71   | \$106,041.53 | \$108,679.15  | \$5,281,884.25 |
| HURON TOWNSHIP            | \$115,118.76   | \$115,118.76   | \$0.00       | \$0.00        | \$0.00         |
| IMLAY CITY                | \$67,695.85    | \$67,695.85    | \$0.00       | \$0.00        | \$0.00         |
| IMLAY TOWNSHIP            | \$1,936.07     | \$1,936.07     | \$0.00       | \$0.00        | \$0.00         |
| INKSTER                   | \$308,268.19   | \$308,268.19   | \$0.00       | \$0.00        | \$0.00         |
| KEEGO HARBOR              | \$23,949.00    | \$23,949.00    | \$0.00       | \$0.00        | \$0.00         |
| LAPEER                    | \$114,371.81   | \$114,371.81   | \$0.00       | \$0.00        | \$0.00         |
| LAPEER                    | \$1,020.00     | \$0.00         | \$1,020.00   | \$0.00        | \$0.00         |
| LENOX TOWNSHIP            | \$48,054.25    | \$48,054.25    | \$0.00       | \$0.00        | \$0.00         |
| LINCOLN PARK              | \$202,961.20   | \$202,961.20   | \$0.00       | \$0.00        | \$0.00         |
| LIVONIA                   | \$1,059,894.03 | \$1,059,894.03 | \$0.00       | \$0.00        | \$0.00         |



# GLWA Aged Accounts Receivable- Water Accounts

Balances as of 2/28/2018

| Customer Name       | Total Due      | Current        | 46 - 74 Days | 75 - 104 Days | >105 Days |
|---------------------|----------------|----------------|--------------|---------------|-----------|
| MACOMB TWP          | \$833,535.47   | \$833,535.47   | \$0.00       | \$0.00        | \$0.00    |
| MADISON HEIGHTS     | \$151,874.43   | \$151,874.43   | \$0.00       | \$0.00        | \$0.00    |
| MAYFIELD TOWNSHIP   | \$4,479.57     | \$4,479.57     | \$0.00       | \$0.00        | \$0.00    |
| MELVINDALE          | \$128,702.20   | \$128,702.20   | \$0.00       | \$0.00        | \$0.00    |
| NEW HAVEN           | \$45,180.63    | \$45,180.63    | \$0.00       | \$0.00        | \$0.00    |
| NOCWA               | \$3,654,516.47 | \$3,654,516.47 | \$0.00       | \$0.00        | \$0.00    |
| NORTHVILLE          | \$59,707.19    | \$59,707.19    | \$0.00       | \$0.00        | \$0.00    |
| NORTHVILLE TOWNSHIP | \$457,023.15   | \$457,023.15   | \$0.00       | \$0.00        | \$0.00    |
| NOVI                | \$1,562,709.00 | \$1,562,709.00 | \$0.00       | \$0.00        | \$0.00    |
| OAK PARK            | \$224,228.08   | \$224,228.08   | \$0.00       | \$0.00        | \$0.00    |
| OAKLAND CO DR COM   | \$4,968.27     | \$4,968.27     | \$0.00       | \$0.00        | \$0.00    |
| PLYMOUTH            | \$82,680.10    | \$82,680.10    | \$0.00       | \$0.00        | \$0.00    |
| PLYMOUTH TOWNSHIP   | \$664,474.64   | \$644,134.56   | \$20,340.08  | \$0.00        | \$0.00    |
| REDFORD TOWNSHIP    | \$284,609.64   | \$284,609.64   | \$0.00       | \$0.00        | \$0.00    |
| RIVER ROUGE         | \$58,643.10    | \$58,643.10    | \$0.00       | \$0.00        | \$0.00    |
| RIVERVIEW           | \$78,601.36    | \$78,601.36    | \$0.00       | \$0.00        | \$0.00    |
| ROCKWOOD            | \$24,218.87    | \$24,218.87    | \$0.00       | \$0.00        | \$0.00    |
| ROMEO               | \$18,925.18    | \$18,925.18    | \$0.00       | \$0.00        | \$0.00    |
| ROMULUS             | \$597,552.96   | \$597,552.96   | \$0.00       | \$0.00        | \$0.00    |
| ROSEVILLE           | \$443,317.95   | \$443,317.95   | \$0.00       | \$0.00        | \$0.00    |
| ROYAL OAK TOWNSHIP  | \$23,061.93    | \$23,061.93    | \$0.00       | \$0.00        | \$0.00    |
| SHELBY TOWNSHIP     | \$1,055,635.41 | \$1,055,635.41 | \$0.00       | \$0.00        | \$0.00    |
| SOCWA               | \$3,566,299.75 | \$3,566,299.75 | \$0.00       | \$0.00        | \$0.00    |

# GLWA Aged Accounts Receivable- Water Accounts

Balances as of 2/28/2018

| Customer Name             | Total Due      | Current        | 46 - 74 Days | 75 - 104 Days | >105 Days |
|---------------------------|----------------|----------------|--------------|---------------|-----------|
| SOUTH ROCKWOOD            | \$8,365.07     | \$8,365.07     | \$0.00       | \$0.00        | \$0.00    |
| SOUTHGATE                 | \$179,791.04   | \$179,791.04   | \$0.00       | \$0.00        | \$0.00    |
| ST. CLAIR SHORES          | \$259,729.77   | \$259,729.77   | \$0.00       | \$0.00        | \$0.00    |
| STERLING HEIGHTS          | \$1,199,381.18 | \$1,199,381.18 | \$0.00       | \$0.00        | \$0.00    |
| SUMPTER TOWNSHIP          | \$54,312.76    | \$54,312.76    | \$0.00       | \$0.00        | \$0.00    |
| SYLVAN LAKE               | \$37,667.73    | \$37,667.73    | \$0.00       | \$0.00        | \$0.00    |
| TAYLOR                    | \$771,173.13   | \$771,173.13   | \$0.00       | \$0.00        | \$0.00    |
| TRENTON                   | \$178,797.89   | \$178,797.89   | \$0.00       | \$0.00        | \$0.00    |
| TROY (SEOC)               | \$1,058,591.95 | \$1,058,591.95 | \$0.00       | \$0.00        | \$0.00    |
| UTICA                     | \$48,775.59    | \$48,775.59    | \$0.00       | \$0.00        | \$0.00    |
| VAN BUREN TOWNSHIP        | \$233,257.58   | \$233,257.58   | \$0.00       | \$0.00        | \$0.00    |
| VILLAGE OF ALMONT         | \$18,251.29    | \$18,251.29    | \$0.00       | \$0.00        | \$0.00    |
| WALLED LAKE               | \$152,278.08   | \$152,278.08   | \$0.00       | \$0.00        | \$0.00    |
| WARREN                    | \$809,458.30   | \$809,458.30   | \$0.00       | \$0.00        | \$0.00    |
| WASHINGTON TOWNSHIP       | \$143,706.29   | \$143,706.29   | \$0.00       | \$0.00        | \$0.00    |
| WAYNE                     | \$468,588.29   | \$468,588.29   | \$0.00       | \$0.00        | \$0.00    |
| WEST BLOOMFIELD TWP (C-O) | \$1,531,894.13 | \$1,531,894.13 | \$0.00       | \$0.00        | \$0.00    |
| WESTLAND                  | \$1,005,723.99 | \$1,005,723.99 | \$0.00       | \$0.00        | \$0.00    |
| WIXOM                     | \$193,118.77   | \$193,118.77   | \$0.00       | \$0.00        | \$0.00    |
| WOODHAVEN                 | \$160,015.01   | \$160,015.01   | \$0.00       | \$0.00        | \$0.00    |
| YCUA                      | \$1,756,304.98 | \$1,756,304.98 | \$0.00       | \$0.00        | \$0.00    |

# GLWA Aged Accounts Receivable- Water Accounts

Balances as of 2/28/2018

| Customer Name        | Total Due       | Current         | 46 - 74 Days | 75 - 104 Days | >105 Days      |
|----------------------|-----------------|-----------------|--------------|---------------|----------------|
| TOTAL Water Accounts | \$40,456,466.06 | \$34,634,113.78 | \$524,759.34 | \$15,708.69   | \$5,281,884.25 |

# GLWA Aged Accounts Receivable- Sewer Accounts

Balances as of 2/28/2018

| Customer Name               | Total Due              | Current                | 46 - 74 Days        | 75 - 104 Days       | >105 Days              |
|-----------------------------|------------------------|------------------------|---------------------|---------------------|------------------------|
| ALLEN PARK                  | \$64,300.00            | \$64,300.00            | \$0.00              | \$0.00              | \$0.00                 |
| CENTER LINE                 | \$82,199.50            | \$82,199.50            | \$0.00              | \$0.00              | \$0.00                 |
| DEARBORN                    | \$0.00                 | \$0.00                 | \$0.00              | \$0.00              | \$0.00                 |
| EVERGREEN-FARMINGTON        | \$2,811,100.00         | \$2,811,100.00         | \$0.00              | \$0.00              | \$0.00                 |
| FARMINGTON                  | \$0.00                 | \$0.00                 | \$0.00              | \$0.00              | \$0.00                 |
| GROSSE POINTE               | \$0.00                 | \$0.00                 | \$0.00              | \$0.00              | \$0.00                 |
| GROSSE POINTE FARMS         | \$0.00                 | \$0.00                 | \$0.00              | \$0.00              | \$0.00                 |
| GROSSE POINTE PARK          | \$0.00                 | \$0.00                 | \$0.00              | \$0.00              | \$0.00                 |
| HAMTRAMCK                   | \$0.00                 | \$0.00                 | \$0.00              | \$0.00              | \$0.00                 |
| HARPER WOODS                | \$0.00                 | \$0.00                 | \$0.00              | \$0.00              | \$0.00                 |
| HIGHLAND PARK               | \$30,213,544.28        | \$470,200.00           | \$470,200.00        | \$470,200.00        | \$28,802,944.28        |
| MELVINDALE                  | \$122,300.00           | \$122,300.00           | \$0.00              | \$0.00              | \$0.00                 |
| OAKLAND COUNTY GWK DD       | \$3,812,600.00         | \$3,812,600.00         | \$0.00              | \$0.00              | \$0.00                 |
| OMID                        | \$6,068,000.00         | \$6,068,000.00         | \$0.00              | \$0.00              | \$0.00                 |
| REDFORD TOWNSHIP            | \$0.00                 | \$0.00                 | \$0.00              | \$0.00              | \$0.00                 |
| ROUGE VALLEY                | \$0.00                 | \$0.00                 | \$0.00              | \$0.00              | \$0.00                 |
| WAYNE COUNTY N.E.           | \$0.00                 | \$0.00                 | \$0.00              | \$0.00              | \$0.00                 |
| WAYNE COUNTY-AREA #3        | \$0.00                 | \$0.00                 | \$0.00              | \$0.00              | \$0.00                 |
| <b>TOTAL Sewer Accounts</b> | <b>\$43,174,043.78</b> | <b>\$13,430,699.50</b> | <b>\$470,200.00</b> | <b>\$470,200.00</b> | <b>\$28,802,944.28</b> |

# GLWA Aged Accounts Receivable- IWC Accounts

Balances as of 2/28/2018

| Customer Name            | Total Due    | Current      | 46 - 74 Days | 75 - 104 Days | >105 Days   |
|--------------------------|--------------|--------------|--------------|---------------|-------------|
| ALLEN PARK               | \$2,575.88   | \$2,575.88   | \$0.00       | \$0.00        | \$0.00      |
| AUBURN HILLS (C-O)       | \$29,510.44  | \$29,510.44  | \$0.00       | \$0.00        | \$0.00      |
| AUBURN HILLS (E-F)       | \$570.84     | \$570.84     | \$0.00       | \$0.00        | \$0.00      |
| BERKLEY                  | \$4,632.04   | \$4,632.04   | \$0.00       | \$0.00        | \$0.00      |
| BEVERLY HILLS            | \$1,596.08   | \$1,596.08   | \$0.00       | \$0.00        | \$0.00      |
| BINGHAM FARMS            | \$0.00       | \$0.00       | \$0.00       | \$0.00        | \$0.00      |
| BIRMINGHAM (E-F)         | \$3,797.08   | \$3,797.08   | \$0.00       | \$0.00        | \$0.00      |
| BIRMINGHAM (SEOC)        | \$17,724.44  | \$17,687.52  | \$0.00       | \$36.92       | \$0.00      |
| BLOOMFIELD HILLS         | \$0.00       | \$0.00       | \$0.00       | \$0.00        | \$0.00      |
| BLOOMFIELD TOWNSHIP      | \$9,928.64   | \$9,928.64   | \$0.00       | \$0.00        | \$0.00      |
| CANTON TOWNSHIP          | \$213,096.56 | \$60,923.68  | \$0.00       | \$60,923.68   | \$91,249.20 |
| CENTER LINE              | \$5,884.48   | \$5,884.48   | \$0.00       | \$0.00        | \$0.00      |
| CHESTERFIELD TOWNSHIP    | \$19,331.88  | \$19,331.88  | \$0.00       | \$0.00        | \$0.00      |
| CITY OF FARMINGTON (E-F) | \$445.88     | \$445.88     | \$0.00       | \$0.00        | \$0.00      |
| CITY OF ROCHESTER        | \$5,949.80   | \$5,949.80   | \$0.00       | \$0.00        | \$0.00      |
| CLARKSTON                | \$491.32     | \$491.32     | \$0.00       | \$0.00        | \$0.00      |
| CLAWSON                  | \$4,413.36   | \$4,413.36   | \$0.00       | \$0.00        | \$0.00      |
| CLINTON TOWNSHIP         | \$40,163.28  | \$40,163.28  | \$0.00       | \$0.00        | \$0.00      |
| DEARBORN                 | \$116,536.56 | \$116,536.56 | \$0.00       | \$0.00        | \$0.00      |
| DEARBORN HEIGHTS         | \$15,270.68  | \$15,270.68  | \$0.00       | \$0.00        | \$0.00      |
| DETROIT METRO WC AIRPORT | \$170.40     | \$170.40     | \$0.00       | \$0.00        | \$0.00      |
| EASTPOINTE               | \$10,144.48  | \$10,144.48  | \$0.00       | \$0.00        | \$0.00      |
| FARMINGTON               | \$5,289.93   | \$5,289.93   | \$0.00       | \$0.00        | \$0.00      |

# GLWA Aged Accounts Receivable- IWC Accounts

Balances as of 2/28/2018

| Customer Name        | Total Due      | Current     | 46 - 74 Days | 75 - 104 Days | >105 Days      |
|----------------------|----------------|-------------|--------------|---------------|----------------|
| FARMINGTON HILLS     | \$0.00         | \$0.00      | \$0.00       | \$0.00        | \$0.00         |
| FERNDALE             | \$14,154.87    | \$14,154.87 | \$0.00       | \$0.00        | \$0.00         |
| FRASER               | \$0.00         | \$0.00      | \$0.00       | \$0.00        | \$0.00         |
| GARDEN CITY          | \$0.00         | \$0.00      | \$0.00       | \$0.00        | \$0.00         |
| GROSSE POINTE        | \$2,524.76     | \$2,524.76  | \$0.00       | \$0.00        | \$0.00         |
| GROSSE POINTE FARMS  | \$0.00         | \$0.00      | \$0.00       | \$0.00        | \$0.00         |
| GROSSE POINTE PARK   | \$1,888.60     | \$1,888.60  | \$0.00       | \$0.00        | \$0.00         |
| GROSSE POINTE SHORES | \$0.00         | \$0.00      | \$0.00       | \$0.00        | \$0.00         |
| GROSSE POINTE WOODS  | \$0.00         | \$0.00      | \$0.00       | \$0.00        | \$0.00         |
| HAMTRAMCK            | \$6,668.32     | \$6,668.32  | \$0.00       | \$0.00        | \$0.00         |
| HARPER WOODS         | \$2,911.00     | \$2,911.00  | \$0.00       | \$0.00        | \$0.00         |
| HARRISON TWP         | \$10,025.20    | \$10,025.20 | \$0.00       | \$0.00        | \$0.00         |
| HAZEL PARK           | \$5,373.28     | \$5,373.28  | \$0.00       | \$0.00        | \$0.00         |
| HIGHLAND PARK        | \$1,597,735.49 | \$13,183.28 | \$0.00       | \$13,376.40   | \$1,571,175.81 |
| HUNTINGTON WOODS     | \$457.24       | \$457.24    | \$0.00       | \$0.00        | \$0.00         |
| INDEPENDENCE         | \$7,435.12     | \$7,435.12  | \$0.00       | \$0.00        | \$0.00         |
| INKSTER              | \$8,883.52     | \$8,883.52  | \$0.00       | \$0.00        | \$0.00         |
| KEEGO HARBOR         | \$ (67.98)     | \$ (67.98)  | \$0.00       | \$0.00        | \$0.00         |
| LAKE ORION           | \$1,198.48     | \$1,198.48  | \$0.00       | \$0.00        | \$0.00         |
| LATHRUP              | \$2,246.44     | \$2,246.44  | \$0.00       | \$0.00        | \$0.00         |
| LENOX TOWNSHIP       | \$284.00       | \$284.00    | \$0.00       | \$0.00        | \$0.00         |
| LIVONIA              | \$63,576.24    | \$63,576.24 | \$0.00       | \$0.00        | \$0.00         |

# GLWA Aged Accounts Receivable- IWC Accounts

Balances as of 2/28/2018

| Customer Name        | Total Due    | Current     | 46 - 74 Days | 75 - 104 Days | >105 Days   |
|----------------------|--------------|-------------|--------------|---------------|-------------|
| MACOMB TWP           | \$329.44     | \$329.44    | \$0.00       | \$0.00        | \$0.00      |
| MADISON HEIGHTS      | \$0.00       | \$0.00      | \$0.00       | \$0.00        | \$0.00      |
| MELVINDALE           | \$11,598.56  | \$11,598.56 | \$0.00       | \$0.00        | \$0.00      |
| NEW HAVEN            | \$0.00       | \$0.00      | \$0.00       | \$0.00        | \$0.00      |
| NORTHVILLE           | \$2,916.68   | \$2,916.68  | \$0.00       | \$0.00        | \$0.00      |
| NORTHVILLE TOWNSHIP  | \$51,151.24  | \$14,614.64 | \$0.00       | \$14,614.64   | \$21,921.96 |
| NOVI                 | \$27,573.56  | \$27,573.56 | \$0.00       | \$0.00        | \$0.00      |
| OAK PARK             | \$22,010.00  | \$22,010.00 | \$0.00       | \$0.00        | \$0.00      |
| OAKLAND TOWNSHIP     | \$102.00     | \$102.00    | \$0.00       | \$0.00        | \$0.00      |
| ORCHARD LAKE VILLAGE | \$0.00       | \$0.00      | \$0.00       | \$0.00        | \$0.00      |
| ORION TOWNSHIP (C-O) | \$8,752.88   | \$8,752.88  | \$0.00       | \$0.00        | \$0.00      |
| OXFORD TOWNSHIP      | \$0.00       | \$0.00      | \$0.00       | \$0.00        | \$0.00      |
| OXFORD VILLAGE       | \$2,010.72   | \$2,010.72  | \$0.00       | \$0.00        | \$0.00      |
| PLEASANT RIDGE       | \$431.68     | \$431.68    | \$0.00       | \$0.00        | \$0.00      |
| PLYMOUTH             | \$0.00       | \$0.00      | \$0.00       | \$0.00        | \$0.00      |
| PLYMOUTH TOWNSHIP    | \$122,040.48 | \$40,680.16 | \$0.00       | \$40,680.16   | \$40,680.16 |
| REDFORD TOWNSHIP     | \$19,426.64  | \$19,426.64 | \$0.00       | \$0.00        | \$0.00      |
| ROCHESTER HILLS      | \$29,019.12  | \$29,019.12 | \$0.00       | \$0.00        | \$0.00      |
| ROMULUS              | \$2,959.28   | \$2,959.28  | \$0.00       | \$0.00        | \$0.00      |
| ROSEVILLE            | \$22,487.12  | \$22,487.12 | \$0.00       | \$0.00        | \$0.00      |
| ROYAL OAK            | \$21,620.92  | \$21,620.92 | \$0.00       | \$0.00        | \$0.00      |
| ROYAL OAK TOWNSHIP   | \$ (169.98)  | \$0.00      | \$ (169.98)  | \$0.00        | \$0.00      |
| SHELBY TOWNSHIP      | \$19,016.64  | \$19,016.64 | \$0.00       | \$0.00        | \$0.00      |



# GLWA Aged Accounts Receivable- IWC Accounts

Balances as of 2/28/2018

| Customer Name             | Total Due             | Current               | 46 - 74 Days       | 75 - 104 Days       | >105 Days             |
|---------------------------|-----------------------|-----------------------|--------------------|---------------------|-----------------------|
| SOUTHFIELD (E-F)          | \$44,962.88           | \$44,962.88           | \$0.00             | \$0.00              | \$0.00                |
| SOUTHFIELD (SEOC)         | \$6,000.92            | \$6,000.92            | \$0.00             | \$0.00              | \$0.00                |
| ST. CLAIR SHORES          | \$19,422.76           | \$19,422.76           | \$0.00             | \$0.00              | \$0.00                |
| STERLING HEIGHTS          | \$49,756.80           | \$49,756.80           | \$0.00             | \$0.00              | \$0.00                |
| TROY (E-F)                | \$613.44              | \$613.44              | \$0.00             | \$0.00              | \$0.00                |
| TROY (SEOC)               | \$117,695.28          | \$117,695.28          | \$0.00             | \$0.00              | \$0.00                |
| UTICA                     | \$4,694.52            | \$4,694.52            | \$0.00             | \$0.00              | \$0.00                |
| VAN BUREN TOWNSHIP        | \$550.96              | \$550.96              | \$0.00             | \$0.00              | \$0.00                |
| VILLAGE OF FRANKLIN       | \$0.00                | \$0.00                | \$0.00             | \$0.00              | \$0.00                |
| WASHINGTON TOWNSHIP       | \$2,237.92            | \$2,237.92            | \$0.00             | \$0.00              | \$0.00                |
| WATERFORD TOWNSHIP        | \$19,806.16           | \$19,806.16           | \$0.00             | \$0.00              | \$0.00                |
| WAYNE                     | \$8,017.32            | \$8,017.32            | \$0.00             | \$0.00              | \$0.00                |
| WEST BLOOMFIELD TWP (C-O) | \$3,016.08            | \$3,016.08            | \$0.00             | \$0.00              | \$0.00                |
| WEST BLOOMFIELD TWP (E-F) | \$20,095.84           | \$20,095.84           | \$0.00             | \$0.00              | \$0.00                |
| WESTLAND                  | \$36,795.04           | \$36,795.04           | \$0.00             | \$0.00              | \$0.00                |
| <b>TOTAL IWC Accounts</b> | <b>\$2,929,761.53</b> | <b>\$1,075,272.58</b> | <b>\$ (169.98)</b> | <b>\$129,631.80</b> | <b>\$1,725,027.13</b> |

# GLWA Aged Accounts Receivable- Pollutant Surcharge

Balances as of 2/28/2018

| Customer Name                | Total Due     | Current     | 46 - 74 Days | 75 - 104 Days | >105 Days     |
|------------------------------|---------------|-------------|--------------|---------------|---------------|
| A & R PACKING CO., LLC       | \$3,003.68    | \$3,003.68  | \$0.00       | \$0.00        | \$0.00        |
| AACTRON                      | \$0.00        | \$0.00      | \$0.00       | \$0.00        | \$0.00        |
| ACADEMY PACKING CO.          | \$253.81      | \$253.81    | \$0.00       | \$0.00        | \$0.00        |
| ACME RUSTPROOF               | \$37.76       | \$37.76     | \$0.00       | \$0.00        | \$0.00        |
| ADVANCED RESOURCE RECOVERY   | \$1,377.37    | \$1,377.37  | \$0.00       | \$0.00        | \$0.00        |
| AEVITAS SPECIALITY SERVICES  | \$1,877.44    | \$1,877.44  | \$0.00       | \$0.00        | \$0.00        |
| ALEXANDER & HORNUNG          | \$17,263.78   | \$11,166.99 | \$0.00       | \$0.00        | \$6,096.79    |
| ALEXANDER & HORNUNG          | \$55,749.44   | \$31,099.92 | \$0.00       | \$0.00        | \$24,649.52   |
| ALEXANDER & HORNUNG          | \$2,366.86    | \$1,465.74  | \$0.00       | \$0.00        | \$901.12      |
| ALGAL SCIENTIFIC CORPORATION | \$8,182.10    | \$1,810.37  | \$902.91     | \$906.80      | \$4,562.02    |
| ALL CHEM CORP, LLC.          | \$ (175.42)   | \$ (175.42) | \$0.00       | \$0.00        | \$0.00        |
| ALPHA STAMPING COMPANY       | \$0.00        | \$0.00      | \$0.00       | \$0.00        | \$0.00        |
| AMERICAN WASTE TECH INC.     | \$0.00        | \$0.00      | \$0.00       | \$0.00        | \$0.00        |
| ATWATER BREWERY              | \$62.84       | \$62.84     | \$0.00       | \$0.00        | \$0.00        |
| ATWATER BREWERY              | \$1,252.62    | \$1,252.62  | \$0.00       | \$0.00        | \$0.00        |
| AUTOMOTIVE FINISH            | \$9.01        | \$9.01      | \$0.00       | \$0.00        | \$0.00        |
| AXLE BREWING COMPANY, LLC    | \$0.00        | \$0.00      | \$0.00       | \$0.00        | \$0.00        |
| BAFFIN BREWING COMPANY       | \$305.23      | \$0.00      | \$0.00       | \$0.00        | \$305.23      |
| BARABOO BREWING COMPANY      | \$ (2,568.34) | \$0.00      | \$0.00       | \$0.00        | \$ (2,568.34) |
| BARON INDUSTRIES             | \$957.61      | \$957.61    | \$0.00       | \$0.00        | \$0.00        |
| BARTZ BAKERY                 | \$0.00        | \$0.00      | \$0.00       | \$0.00        | \$0.00        |
| BASTONE BREWERY              | \$8.23        | \$8.23      | \$0.00       | \$0.00        | \$0.00        |
| BATCH BREWING COMPANY        | \$ (803.43)   | \$0.00      | \$0.00       | \$0.00        | \$ (803.43)   |

# GLWA Aged Accounts Receivable- Pollutant Surcharge

Balances as of 2/28/2018

| Customer Name               | Total Due   | Current     | 46 - 74 Days | 75 - 104 Days | >105 Days  |
|-----------------------------|-------------|-------------|--------------|---------------|------------|
| BAYS MICHIGAN CORPORATION   | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00     |
| BEIRUT BAKERY, INC.         | \$65.41     | \$0.00      | \$65.41      | \$0.00        | \$0.00     |
| BETTER MADE SNACK FOOD      | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00     |
| BLACK LOTUS BREWING CO.     | \$ (43.69)  | \$0.00      | \$0.00       | \$0.00        | \$ (43.69) |
| BOZEK'S MARKET              | \$81.80     | \$81.80     | \$0.00       | \$0.00        | \$0.00     |
| BREW DETROIT                | \$1,596.15  | \$1,596.15  | \$0.00       | \$0.00        | \$0.00     |
| BROADWAY MKT CORNED BEEF    | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00     |
| BROOKS BREWING, LLC.        | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00     |
| CANTON BREW WORKS           | \$60.76     | \$60.76     | \$0.00       | \$0.00        | \$0.00     |
| CAPITAL REPRODUCTIONS       | \$4.63      | \$0.00      | \$0.00       | \$4.63        | \$0.00     |
| CF BURGER CREAMERY          | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00     |
| CHILANGO'S BAKERY           | \$1,752.18  | \$90.94     | \$108.49     | \$52.65       | \$1,500.10 |
| CINTAS CORP. - MACOMB TWP.  | \$54,186.60 | \$54,186.60 | \$0.00       | \$0.00        | \$0.00     |
| CINTAS CORPORATION          | \$37,340.72 | \$37,340.72 | \$0.00       | \$0.00        | \$0.00     |
| CINTAS CORPORATION          | \$11,963.17 | \$11,963.17 | \$0.00       | \$0.00        | \$0.00     |
| CITY LAUNDRY, INC.          | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00     |
| CLASSIC CONTAINER CORP.     | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00     |
| COCA-COLA REFRESHMENTS USA, | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00     |
| COSTCO WHOLESALE STORE      | \$2,172.09  | \$2,172.09  | \$0.00       | \$0.00        | \$0.00     |
| COSTCO WHOLESALE STORE      | \$768.61    | \$768.61    | \$0.00       | \$0.00        | \$0.00     |
| COSTCO WHOLESALE STORE      | \$1,318.77  | \$1,318.77  | \$0.00       | \$0.00        | \$0.00     |
| COSTCO WHOLESALE STORE      | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00     |

# GLWA Aged Accounts Receivable- Pollutant Surcharge

Balances as of 2/28/2018

| Customer Name                | Total Due   | Current     | 46 - 74 Days | 75 - 104 Days | >105 Days |
|------------------------------|-------------|-------------|--------------|---------------|-----------|
| COUNTRY FRESH DAIRY CO.      | \$30,004.65 | \$30,004.65 | \$0.00       | \$0.00        | \$0.00    |
| CROSS CHEMICAL COMPANY, INC. | \$ (579.58) | \$ (579.58) | \$0.00       | \$0.00        | \$0.00    |
| DARLING INGREDIENTS, INC.    | \$19,240.43 | \$19,240.43 | \$0.00       | \$0.00        | \$0.00    |
| DAVE'S SAUSAGE FACTORY 2     | \$376.50    | \$376.50    | \$0.00       | \$0.00        | \$0.00    |
| DEARBORN BREWING             | \$32.34     | \$32.34     | \$0.00       | \$0.00        | \$0.00    |
| DEARBORN SAUSAGE             | \$3,797.78  | \$3,797.78  | \$0.00       | \$0.00        | \$0.00    |
| DEARBORN SAUSAGE CO., INC.   | \$12,839.68 | \$12,839.68 | \$0.00       | \$0.00        | \$0.00    |
| DETROIT BEER                 | \$111.43    | \$111.43    | \$0.00       | \$0.00        | \$0.00    |
| DETROIT LINEN SERVICE        | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| DETROIT METRO WC AIRPORT     | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| DETROIT SAUSAGES CO INC      | \$14.10     | \$14.10     | \$0.00       | \$0.00        | \$0.00    |
| DETRONIC INDUSTRIES, INC.    | \$87.43     | \$87.43     | \$0.00       | \$0.00        | \$0.00    |
| DIFCO LABORATORIES, INC.     | \$9,769.58  | \$9,769.58  | \$0.00       | \$0.00        | \$0.00    |
| DIVERSIFIED CHEM TECH. INC.  | \$64.59     | \$64.59     | \$0.00       | \$0.00        | \$0.00    |
| DOMESTIC UNIFORM RENTAL      | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| DOMESTIC UNIFORM RENTAL      | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| E.W. GROBBEL'S SONS, INC.    | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| ENVIROSOLIDS, L.L.C.         | \$27,631.15 | \$27,631.15 | \$0.00       | \$0.00        | \$0.00    |
| EQ DETROIT, INC.             | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| EQ DETROIT, INC.             | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| EQ DETROIT, INC.             | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| EQ DETROIT, INC.             | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| EQ RESOURCES RECOVERY, INC.  | \$2,384.16  | \$2,384.16  | \$0.00       | \$0.00        | \$0.00    |

# GLWA Aged Accounts Receivable- Pollutant Surcharge

Balances as of 2/28/2018

| Customer Name                | Total Due    | Current     | 46 - 74 Days | 75 - 104 Days | >105 Days   |
|------------------------------|--------------|-------------|--------------|---------------|-------------|
| ETON ST BREWERY- GRIFFIN CLF | \$0.00       | \$0.00      | \$0.00       | \$0.00        | \$0.00      |
| EXTRUDE HONE CORPORATION     | \$253.55     | \$253.55    | \$0.00       | \$0.00        | \$0.00      |
| EXTRUDEHODE                  | \$0.00       | \$0.00      | \$0.00       | \$0.00        | \$0.00      |
| FARMINGTON BREWING COMPANY   | \$64.43      | \$64.43     | \$0.00       | \$0.00        | \$0.00      |
| FAYGO BEVERAGES, INC.        | \$177,251.40 | \$25,544.06 | \$27,682.83  | \$31,404.99   | \$92,619.52 |
| FORD NEW MODEL PROGRAM       | \$149.04     | \$149.04    | \$0.00       | \$0.00        | \$0.00      |
| FRESH-PAK                    | \$1,110.66   | \$1,110.66  | \$0.00       | \$0.00        | \$0.00      |
| FRESH-PAK                    | \$3,990.34   | \$3,990.34  | \$0.00       | \$0.00        | \$0.00      |
| GENERAL LINEN SUPPLY CO.     | \$55,137.92  | \$12,118.11 | \$11,010.37  | \$11,802.74   | \$20,206.70 |
| GLOBAL TITANIUM, INC.        | \$0.00       | \$0.00      | \$0.00       | \$0.00        | \$0.00      |
| GLOBAL TITANIUM, INC.        | \$0.00       | \$0.00      | \$0.00       | \$0.00        | \$0.00      |
| GRANITE CITY FOOD & BREWERY  | \$98.40      | \$98.40     | \$0.00       | \$0.00        | \$0.00      |
| GRANITE CITY FOOD & BREWERY  | \$51.19      | \$51.19     | \$0.00       | \$0.00        | \$0.00      |
| GRANITE CITY FOOD & BREWERY  | \$212.02     | \$110.26    | \$0.00       | \$0.00        | \$101.76    |
| HACIENDA MEXICAN FOODS       | \$3,116.32   | \$545.51    | \$570.81     | \$660.80      | \$1,339.20  |
| HENKEL CORPORATION           | \$134.47     | \$134.47    | \$0.00       | \$0.00        | \$0.00      |
| HOME STYLE FOOD INC.         | \$3,879.64   | \$3,879.64  | \$0.00       | \$0.00        | \$0.00      |
| HOOD CLEANERS                | \$206.44     | \$6.84      | \$7.81       | \$6.84        | \$184.95    |
| HOUGHTON INTERNATIONAL INC.  | \$0.00       | \$0.00      | \$0.00       | \$0.00        | \$0.00      |
| HOUGHTON INTERNATIONAL INC.  | \$0.00       | \$0.00      | \$0.00       | \$0.00        | \$0.00      |
| HOUGHTON INTERNATIONAL INC.  | \$0.00       | \$0.00      | \$0.00       | \$0.00        | \$0.00      |
| HUNTINGTON CLEANERS          | \$0.00       | \$0.00      | \$0.00       | \$0.00        | \$0.00      |

# GLWA Aged Accounts Receivable- Pollutant Surcharge

Balances as of 2/28/2018

| Customer Name                | Total Due   | Current     | 46 - 74 Days | 75 - 104 Days | >105 Days |
|------------------------------|-------------|-------------|--------------|---------------|-----------|
| INDUSTRIAL METAL COATING     | \$850.16    | \$850.16    | \$0.00       | \$0.00        | \$0.00    |
| ISLAMIC SLAUGHTER HOUSE      | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| ITALIAN BUTTER BREAD STICKS  | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| J & G FOOD PRODUCTS, INC.    | \$126.92    | \$126.92    | \$0.00       | \$0.00        | \$0.00    |
| KAR NUT PRODUCTS             | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| KOWALSKI SAUSAGES, CO.       | \$760.05    | \$760.05    | \$0.00       | \$0.00        | \$0.00    |
| LA MICHOACANA FLOUR TORTILLA | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| LA MICHOACANA FLOUR TORTILLA | \$67.49     | \$67.49     | \$0.00       | \$0.00        | \$0.00    |
| LEAR CORPORATION DBA EAGLE C | \$5,080.89  | \$5,080.89  | \$0.00       | \$0.00        | \$0.00    |
| LIBERTY STREET PROD. BREWERY | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| LILY'S SEAFOOD GRILL & BREWE | \$ (0.52)   | \$0.00      | \$0.00       | \$ (0.52)     | \$0.00    |
| MACDERMID, INC.              | \$4,806.44  | \$4,806.44  | \$0.00       | \$0.00        | \$0.00    |
| MCNICHOLS POLISHING & ANODIZ | \$32.35     | \$0.00      | \$32.35      | \$0.00        | \$0.00    |
| MELLO MEATS INC, - KUBISCH S | \$84.62     | \$84.62     | \$0.00       | \$0.00        | \$0.00    |
| METROPOLITAN BAKERY          | \$483.41    | \$483.41    | \$0.00       | \$0.00        | \$0.00    |
| MIBA HYDRAMECHANICA CORP.    | \$374.95    | \$374.95    | \$0.00       | \$0.00        | \$0.00    |
| MICHIGAN DAIRY               | \$62,093.25 | \$62,093.25 | \$0.00       | \$0.00        | \$0.00    |
| MICHIGAN PROD. MACHINING     | \$1,799.77  | \$1,799.77  | \$0.00       | \$0.00        | \$0.00    |
| MICHIGAN SOY PRODUCTS CO.    | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| MIDWEST WIRE PRODUCTS, INC.  | \$ (2.94)   | \$0.00      | \$0.00       | \$0.00        | \$ (2.94) |
| MILANO BAKERY                | \$701.60    | \$701.60    | \$0.00       | \$0.00        | \$0.00    |
| MILTON CHILI CO.             | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| MINNIE MARIE BAKERS, INC     | \$1,325.80  | \$1,325.80  | \$0.00       | \$0.00        | \$0.00    |

# GLWA Aged Accounts Receivable- Pollutant Surcharge

Balances as of 2/28/2018

| Customer Name                  | Total Due   | Current     | 46 - 74 Days | 75 - 104 Days | >105 Days |
|--------------------------------|-------------|-------------|--------------|---------------|-----------|
| MISTER UNIFORM & MAT RENTALS   | \$377.58    | \$39.38     | \$32.12      | \$32.47       | \$273.61  |
| MOTOR CITY BREWING WORKS       | \$663.80    | \$663.80    | \$0.00       | \$0.00        | \$0.00    |
| NATIONAL CHILI COMPANY         | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| NATIONAL CHILI COMPANY         | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| NORTH CENTER BREWING COMPANY   | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| NORTHERN LAKES SEAFOOD & MEAT  | \$20.18     | \$20.18     | \$0.00       | \$0.00        | \$0.00    |
| OAKWOOD BAKERY                 | \$ (196.43) | \$ (196.43) | \$0.00       | \$0.00        | \$0.00    |
| PELLERITO FOODS INC.           | \$631.75    | \$631.75    | \$0.00       | \$0.00        | \$0.00    |
| PEPSI COLA, INC.               | \$11,787.50 | \$11,787.50 | \$0.00       | \$0.00        | \$0.00    |
| PERSONAL UNIFORM SERVICE, INC. | \$306.16    | \$144.34    | \$161.82     | \$0.00        | \$0.00    |
| PETRO ENVIRON TECH, INC.       | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| PINE TREE ACRES, INC.          | \$31,394.19 | \$31,394.19 | \$0.00       | \$0.00        | \$0.00    |
| PLATING SPEC                   | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| POWER VAC OF MICHIGAN, INC.    | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| PREMIER PLATING, LLC           | \$1,146.53  | \$1,146.53  | \$0.00       | \$0.00        | \$0.00    |
| PRODUCTION SPRING, LLC.        | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| QUALA SERVICES, LLC            | \$141.59    | \$141.59    | \$0.00       | \$0.00        | \$0.00    |
| RAY'S ICE CREAM CO.            | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| RED SPOT PAINT #409139         | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| RIVER ROUGE BREWING COMPANY    | \$0.00      | \$0.00      | \$0.00       | \$0.00        | \$0.00    |
| ROAK BREWING CO. LLC           | \$1,294.77  | \$1,294.77  | \$0.00       | \$0.00        | \$0.00    |
| ROCHESTER MILLS BEER COMPANY   | \$323.12    | \$323.12    | \$0.00       | \$0.00        | \$0.00    |

# GLWA Aged Accounts Receivable- Pollutant Surcharge

Balances as of 2/28/2018

| Customer Name                | Total Due     | Current       | 46 - 74 Days | 75 - 104 Days | >105 Days     |
|------------------------------|---------------|---------------|--------------|---------------|---------------|
| ROCHESTER MILLS BREWERY      | \$3,200.13    | \$1,286.54    | \$0.00       | \$0.00        | \$1,913.59    |
| RTT                          | \$22,088.76   | \$1,169.24    | \$0.00       | \$1,416.39    | \$19,503.13   |
| SEAFARE FOODS, INC.          | \$0.00        | \$0.00        | \$0.00       | \$0.00        | \$0.00        |
| SHERWOOD BREWING COMPANY     | \$0.00        | \$0.00        | \$0.00       | \$0.00        | \$0.00        |
| SPRAYTEK, INC.               | \$3,951.85    | \$59.68       | \$40.19      | \$29.81       | \$3,822.17    |
| SWEETHEART BAKERY, INC.      | \$270.80      | \$82.10       | \$66.26      | \$59.06       | \$63.38       |
| THE CROWN GROUP-LIVONIA PLAN | \$0.00        | \$0.00        | \$0.00       | \$0.00        | \$0.00        |
| THE ROYAL OAK BREWERY        | \$ (1,951.56) | \$0.00        | \$0.00       | \$0.00        | \$ (1,951.56) |
| TOM LAUNDRY CLEANERS         | \$12.69       | \$12.69       | \$0.00       | \$0.00        | \$0.00        |
| TRAFFIC JAM & SNUG           | \$ (61.24)    | \$0.00        | \$0.00       | \$0.00        | \$ (61.24)    |
| TURRI'S ITALIAN FOODS        | \$0.00        | \$0.00        | \$0.00       | \$0.00        | \$0.00        |
| TURRI'S ITALIAN FOODS        | \$0.00        | \$0.00        | \$0.00       | \$0.00        | \$0.00        |
| U-METCO, INC.                | \$0.00        | \$0.00        | \$0.00       | \$0.00        | \$0.00        |
| UNCLE RAYS SNACKS, LLC       | \$30,558.05   | \$30,558.05   | \$0.00       | \$0.00        | \$0.00        |
| UNCLE RAYS SNACKS, LLC       | \$0.00        | \$0.00        | \$0.00       | \$0.00        | \$0.00        |
| UNIQUE LINEN SERVICES, INC.  | \$70.22       | \$70.22       | \$0.00       | \$0.00        | \$0.00        |
| UNITED FISH DISTRIBUTORS     | \$0.00        | \$0.00        | \$0.00       | \$0.00        | \$0.00        |
| UNITED LINEN SERVICE, LLC.   | \$0.00        | \$0.00        | \$0.00       | \$0.00        | \$0.00        |
| UNITED MEAT & DELI           | \$0.00        | \$0.00        | \$0.00       | \$0.00        | \$0.00        |
| US ECOLOGY MICHIGAN          | \$ (6,456.30) | \$ (6,456.30) | \$0.00       | \$0.00        | \$0.00        |
| USHER OIL SERVICES           | \$2,299.05    | \$2,299.05    | \$0.00       | \$0.00        | \$0.00        |
| VERNDALE PRODUCTS            | \$ (3,450.80) | \$ (3,450.80) | \$0.00       | \$0.00        | \$0.00        |
| VERNDALE PRODUCTS, INC.      | \$0.00        | \$0.00        | \$0.00       | \$0.00        | \$0.00        |



# GLWA Aged Accounts Receivable- Pollutant Surcharge

Balances as of 2/28/2018

| Customer Name                    | Total Due           | Current             | 46 - 74 Days       | 75 - 104 Days      | >105 Days           |
|----------------------------------|---------------------|---------------------|--------------------|--------------------|---------------------|
| VERNOR FOOD PRODUCTS             | \$36.55             | \$36.55             | \$0.00             | \$0.00             | \$0.00              |
| WIGLEY'S MEAT PROCESS            | \$389.25            | \$389.25            | \$0.00             | \$0.00             | \$0.00              |
| WINTER SAUSAGE MFG. CO.          | \$1,644.43          | \$1,644.43          | \$0.00             | \$0.00             | \$0.00              |
| WINTER SAUSAGE MFG. CO.          | \$231.29            | \$231.29            | \$0.00             | \$0.00             | \$0.00              |
| WOLVERINE PACKING CO             | \$0.00              | \$0.00              | \$0.00             | \$0.00             | \$0.00              |
| WOLVERINE PACKING CO.            | \$0.00              | \$0.00              | \$0.00             | \$0.00             | \$0.00              |
| WOODWARD AVENUE BREWERS          | \$0.00              | \$0.00              | \$0.00             | \$0.00             | \$0.00              |
| <b>TOTAL Pollutant Surcharge</b> | <b>\$731,166.00</b> | <b>\$471,496.38</b> | <b>\$40,681.37</b> | <b>\$46,376.66</b> | <b>\$172,611.59</b> |



## **Financial Services Audit Committee Communication**

**Date:** March 16, 2018

**To:** Great Lakes Water Authority Audit Committee

**From:** Deirdre Henry, Treasury Manager

**Re:** Master Bond Ordinance Monthly Cash Transfers to Detroit Water & Sewerage Department (DWSD) and Great Lakes Water Authority (GLWA)

**Background:** The Master Bond Ordinances for the water and sewer systems prescribe monthly distributions of cash receipts.

**Analysis:** The attached documents summarize the monthly cash transfers to DWSD and GLWA as stipulated by the Master Bond Ordinances for the period January 2016 – March 2018.

**Proposed Action:** Receive and file report.

**Great Lakes Water Authority**  
**Funds Transferred to DWSD per Master Bond Ordinance**  
**Through March 2, 2018**

| <b>DWSD WATER</b>                      |   |                      |   |                         |
|--|---|----------------------|---|-------------------------|
|  | <b>Operations &amp;<br/>Maintenance</b> | <b>Pension</b>       | <b>Lease Payment<br/>(I&amp;E Fund)</b> | <b>Total Water</b>      |
| <b>Total FY 2016</b>                   | <b>\$ 26,185,600</b>                    | <b>\$ 4,262,700</b>  | <b>\$ 20,173,100</b>                    | <b>\$ 50,621,400</b>    |
| <b>Total FY 2017</b>                   | <b>\$ 33,596,400</b>                    | <b>\$ 4,262,400</b>  | <b>\$ 22,500,000</b>                    | <b>\$ 60,358,800</b>    |
| <b>FY 2018</b>                         |   |                      |   |                         |
| July 2017                              | \$ 2,799,700                            | \$ 356,000           | \$ 1,875,000                            | \$ 5,030,700            |
| August 2017                            | 2,921,642                               | 356,000              | 1,875,000                               | 5,152,642               |
| August 2017                            | 121,942                                 | -                    | -                                       | 121,942 <sup>1)</sup>   |
| September 2017                         | 2,921,642                               | 356,000              | 1,875,000                               | 5,152,642               |
| October 2017                           | 2,921,642                               | 356,000              | 1,875,000                               | 5,152,642               |
| November 2017                          | 2,921,642                               | 356,000              | 1,875,000                               | 5,152,642               |
| December 2017                          | 2,921,642                               | 356,000              | 1,875,000                               | 5,152,642               |
| January 2018                           | 2,921,642                               | 356,000              | 1,875,000                               | 5,152,642               |
| February 2018                          | 2,921,642                               | 356,000              | 1,875,000                               | 5,152,642               |
| March 2018                             | 2,921,642                               | 356,000              | 1,875,000                               | 5,152,642               |
| April 2018                             |   |                      |   | -                       |
| May 2018                               |   |                      |   | -                       |
| June 2018                              |   |                      |   | -                       |
| <b>Total FY 2018</b>                   | <b>\$ 26,294,778</b>                    | <b>\$ 3,204,000</b>  | <b>\$ 16,875,000</b>                    | <b>\$ 46,373,778</b>    |
| <b>Total Water Since Jan 1 2016</b>    | <b>\$ 86,076,778</b>                    | <b>\$ 11,729,100</b> | <b>\$ 59,548,100</b>                    | <b>\$ 157,353,978</b>   |
| <b>DWSD SEWER</b>                      |   |                      |   |                         |
|  | <b>Operations &amp;<br/>Maintenance</b> | <b>Pension</b>       | <b>Lease Payment<br/>(I&amp;E Fund)</b> | <b>Total Sewer</b>      |
| <b>Total FY 2016</b>                   | <b>\$ 19,774,300</b>                    | <b>\$ 2,861,800</b>  | <b>\$ 7,508,500</b>                     | <b>\$ 30,144,600</b>    |
| <b>Total FY 2017</b>                   | <b>\$ 41,535,600</b>                    | <b>\$ 2,862,000</b>  | <b>\$ 27,500,000</b>                    | <b>\$ 71,897,600</b>    |
| <b>FY 2018</b>                         |   |                      |   |                         |
| July 2017                              | \$ 3,461,300                            | \$ 238,000           | \$ 2,291,667                            | \$ 5,990,967            |
| August 2017                            | 5,043,166                               | 238,000              | 2,291,667                               | 7,572,833               |
| August 2017                            | 1,581,866                               | -                    | -                                       | 1,581,866 <sup>1)</sup> |
| September 2017                         | 5,043,166                               | 238,000              | 2,291,667                               | 7,572,833               |
| October 2017                           | 5,043,166                               | 238,000              | 2,291,667                               | 7,572,833               |
| November 2017                          | 5,043,166                               | 238,000              | 2,291,667                               | 7,572,833               |
| December 2017                          | 5,043,166                               | 238,000              | 2,291,667                               | 7,572,833               |
| January 2018                           | 5,043,166                               | 238,000              | 2,291,667                               | 7,572,833               |
| February 2018                          | 5,043,166                               | 238,000              | 2,291,667                               | 7,572,833               |
| March 2018                             | 5,043,166                               | 238,000              | -                                       | 5,281,166 <sup>2)</sup> |
| April 2018                             |   |                      |   | -                       |
| May 2018                               |   |                      |   | -                       |
| June 2018                              |   |                      |   | -                       |
| <b>Total FY 2018</b>                   | <b>\$ 45,388,494</b>                    | <b>\$ 2,142,000</b>  | <b>\$ 18,333,336</b>                    | <b>\$ 65,863,830</b>    |
| <b>Total Sewer Since Jan 1 2016</b>    | <b>\$ 106,698,394</b>                   | <b>\$ 7,865,800</b>  | <b>\$ 53,341,836</b>                    | <b>\$ 167,906,030</b>   |
| <b>Total FY 2016 Water &amp; Sewer</b> | <b>\$ 45,959,900</b>                    | <b>\$ 7,124,500</b>  | <b>\$ 27,681,600</b>                    | <b>\$ 80,766,000</b>    |
| <b>Total FY 2017 Water &amp; Sewer</b> | <b>\$ 75,132,000</b>                    | <b>\$ 7,124,400</b>  | <b>\$ 50,000,000</b>                    | <b>\$ 132,256,400</b>   |
| <b>Total FY 2018 Water &amp; Sewer</b> | <b>\$ 71,683,272</b>                    | <b>\$ 5,346,000</b>  | <b>\$ 35,208,336</b>                    | <b>\$ 112,237,608</b>   |

Note 1: Per Section 3.5 of the Lease, the Lease Payment may be used for:

- (a) bond principal and interest for Local System Improvements,
- (b) bond principal and interest for the City's share of common-to-all System Improvements, and
- (c) Local System improvements paid from the lease payment deposited to the Improvement & Extension (I&E) Fund.

Note 2: For FY 2016, \$22,318,500 million of the lease payment was directed by the City of Detroit to offset a portion of its FY 2016 water and sewer debt service in lieu of a cash transfer.

<sup>1)</sup> Additional Transfer in August to adjust July O&M to DWSD FY18 requested budget amount.

<sup>2)</sup> Mid-Year adjustment in use of lease payment by Local System for FY 2018 budget resulted in \$0 transfer.

**Great Lakes Water Authority**  
**Funds Transferred to Accounts Held by GLWA per Master Bond Ordinance**  
**Through March 2, 2018**

| <b>WATER</b>                           |                                     |                            |                           |                    |   |  |                      |
|--|-------------------------------------|----------------------------|---------------------------|--------------------|---|--|----------------------|
|  | <u>Operations &amp; Maintenance</u> | <u>Pension Sub Account</u> | <u>Pension Obligation</u> | <u>WRAP</u>        | <u>Budget Stabilization (For Benefit of DWSD)</u> | <u>Extraordinary Repair &amp; Replacement (ER&amp;R)</u> | <u>Total Water</u>   |
| <b>Total FY 2016</b>                   | <b>\$71,052,000</b>                 | <b>\$6,037,100</b>         | <b>\$10,297,200</b>       | <b>\$1,983,300</b> | <b>\$2,326,900</b>                                | <b>\$606,000</b>   | <b>\$92,302,500</b>  |
| <b>Total FY 2017</b>                   | <b>\$111,879,600</b>                | <b>\$6,037,200</b>         | <b>\$10,297,200</b>       | <b>\$2,077,200</b> | <b>\$360,000</b>                                  | <b>\$0</b>   | <b>\$130,651,200</b> |
| <b>FY 2018</b>                         |                                     |                            |                           |                    |   |  |                      |
| July 2017                              | \$10,130,217                        | \$504,000                  | \$891,308                 | \$179,950          | -   | -  | \$11,705,475         |
| August 2017                            | 10,130,217                          | 504,000                    | 891,308                   | 179,950            | -   | -  | 11,705,475           |
| September 2017                         | 10,130,217                          | 504,000                    | 891,308                   | 179,950            | -   | -  | 11,705,475           |
| October 2017                           | 10,130,217                          | 504,000                    | 891,308                   | 179,950            | -   | -  | 11,705,475           |
| November 2017                          | 10,130,217                          | 504,000                    | 891,308                   | 179,950            | -   | -  | 11,705,475           |
| December 2017                          | 10,130,217                          | 504,000                    | 891,308                   | 179,950            | -   | -  | 11,705,475           |
| January 2018                           | 10,130,217                          | 504,000                    | 891,308                   | 179,950            | -   | -  | 11,705,475           |
| February 2018                          | 10,130,217                          | 504,000                    | 891,308                   | 179,950            | -   | -  | 11,705,475           |
| March 2018                             | 10,130,217                          | 504,000                    | 891,308                   | 179,950            | -   | -  | 11,705,475           |
| April 2018                             |                                     |                            |                           |                    |   |  | -                    |
| May 2018                               |                                     |                            |                           |                    |   |  | -                    |
| June 2018                              |                                     |                            |                           |                    |   |  | -                    |
| <b>Total FY 2018</b>                   | <b>\$91,171,953</b>                 | <b>\$4,536,000</b>         | <b>\$8,021,772</b>        | <b>\$1,619,550</b> | <b>\$0</b>  | <b>\$0</b>   | <b>\$105,349,275</b> |
| <b>Total Water Since Jan 1 2016</b>    | <b>\$274,103,553</b>                | <b>\$16,610,300</b>        | <b>\$28,616,172</b>       | <b>\$5,680,050</b> | <b>\$2,686,900</b>                                | <b>\$606,000</b>   | <b>\$328,302,975</b> |
| <b>SEWER</b>                           |                                     |                            |                           |                    |   |  |                      |
|  | <u>Operations &amp; Maintenance</u> | <u>Pension Sub Account</u> | <u>Pension Obligation</u> | <u>WRAP</u>        | <u>Budget Stabilization (For Benefit of DWSD)</u> | <u>Extraordinary Repair &amp; Replacement (ER&amp;R)</u> | <u>Total Water</u>   |
| <b>Total FY 2016</b>                   | <b>\$100,865,600</b>                | <b>\$10,838,400</b>        | <b>\$14,025,800</b>       | <b>\$2,523,400</b> | <b>\$5,591,700</b>                                | <b>\$779,600</b>   | <b>\$134,624,500</b> |
| <b>Total FY 2017</b>                   | <b>\$175,858,800</b>                | <b>\$10,838,400</b>        | <b>\$14,026,800</b>       | <b>\$2,654,400</b> | <b>\$2,654,400</b>                                | <b>\$0</b>   | <b>\$206,032,800</b> |
| <b>FY 2018</b>                         |                                     |                            |                           |                    |   |  |                      |
| July 2017                              | \$15,923,283                        | \$902,000                  | \$1,223,958               | \$230,067          | -   | -  | \$18,279,308         |
| August 2017                            | 15,923,283                          | 902,000                    | 1,223,958                 | 230,067            | -   | -  | 18,279,308           |
| September 2017                         | 15,923,283                          | 902,000                    | 1,223,958                 | 230,067            | -   | -  | 18,279,308           |
| October 2017                           | 15,923,283                          | 902,000                    | 1,223,958                 | 230,067            | -   | -  | 18,279,308           |
| November 2017                          | 15,923,283                          | 902,000                    | 1,223,958                 | 230,067            | -   | -  | 18,279,308           |
| December 2017                          | 15,923,283                          | 902,000                    | 1,223,958                 | 230,067            | -   | -  | 18,279,308           |
| January 2018                           | 15,923,283                          | 902,000                    | 1,223,958                 | 230,067            | -   | -  | 18,279,308           |
| February 2018                          | 15,923,283                          | 902,000                    | 1,223,958                 | 230,067            | -   | -  | 18,279,308           |
| March 2018                             | 15,923,283                          | 902,000                    | 1,223,958                 | 230,067            | -   | -  | 18,279,308           |
| April 2018                             |                                     |                            |                           |                    |   |  | -                    |
| May 2018                               |                                     |                            |                           |                    |   |  | -                    |
| June 2018                              |                                     |                            |                           |                    |   |  | -                    |
| <b>Total FY 2018</b>                   | <b>\$143,309,547</b>                | <b>\$8,118,000</b>         | <b>\$11,015,622</b>       | <b>\$2,070,603</b> | <b>\$0</b>  | <b>\$0</b>   | <b>\$164,513,772</b> |
| <b>Total Sewer Since Jan 1 2016</b>    | <b>\$420,033,947</b>                | <b>\$29,794,800</b>        | <b>\$39,068,222</b>       | <b>\$7,248,403</b> | <b>\$8,246,100</b>                                | <b>\$779,600</b>   | <b>\$505,171,072</b> |
| <b>Total FY 2016 Water &amp; Sewer</b> | <b>\$171,917,600</b>                | <b>\$16,875,500</b>        | <b>\$24,323,000</b>       | <b>\$4,506,700</b> | <b>\$7,918,600</b>                                | <b>\$1,385,600</b>                                       | <b>\$226,927,000</b> |
| <b>Total FY 2017 Water &amp; Sewer</b> | <b>\$287,738,400</b>                | <b>\$16,875,600</b>        | <b>\$24,324,000</b>       | <b>\$4,731,600</b> | <b>\$3,014,400</b>                                | <b>\$0</b>   | <b>\$336,684,000</b> |
| <b>Total FY 2018 Water &amp; Sewer</b> | <b>\$234,481,500</b>                | <b>\$12,654,000</b>        | <b>\$19,037,394</b>       | <b>\$3,690,153</b> | <b>\$0</b>  | <b>\$0</b>   | <b>\$269,863,047</b> |

**Financial Services  
Procurement**

735 Randolph Street, Suite 1508  
Detroit, Michigan 48226  
Phone: 313-964-9157

## Memorandum

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**Date:** March 8, 2018

**To:** Audit Committee  
Operations & Resources Committee

**From:** Sonya Collins, Procurement Management Professional

**RE:** Procurement Group Process Improvements - Implementation of Bonfire

**Background:** The Great Lakes Water Authority (GLWA) Procurement Group relies on a fragmented set of tools to manage the sourcing cycle from scope development through contract administration. This includes heavy reliance on various tools such as Excel, Word, Adobe, SharePoint, email, Bidnet/MITN, and various network drives and intranet pages. In addition to gross inefficiencies, the lack of cohesive tools hinders consistent business process, timeliness, ability to measure performance, reduction of human error, and stakeholder satisfaction.

**Analysis:** Along with our partners in the GLWA Information Technology Group, software options were evaluated that could provide a business process framework that aligned with our needs that was also innovative, demonstrated public sector expertise, and is user-friendly. After considering the options available, the clear leader was Bonfire, a software as a service (SaaS) solution. In Fall 2017, the Procurement Group conducted a live pilot of Bonfire for a few key procurements. Feedback from the vendor community, Procurement staff, and internal and external customers was very positive. Based on that hands-on experience and a relatively low cost and condensed implementation timeline, it became apparent that Bonfire was an excellent fit for GLWA's urgent and foreseeable needs. Bonfire spans the "end-to-end" cycle from soliciting suppliers, receiving bids and proposals, evaluating & scoring, documenting awardee decision, and managing the contract.

A few items of note for GLWA's needs.

1. Bonfire can archive all the current and closed solicitations for the public and vendors to view at their discretion along with all supporting documentation. This creates an efficiency because we can now have a link on the GLWA website that directs vendor

to Bonfire for current and/or past solicitations instead of staff posting the request through Public Relations. This reduces redundancies of effort.

2. Bonfire can post award notices (shows what has been awarded) which will archive the original solicitation along with an executed contract in which the public and vendors will also have access to view. Based on other public-sector users' feedback, this reduces the amount of Freedom of Information Act (FOIA) requests received.
3. We will now be able to demonstrate GLWA's commitment to transparency and satisfy our requirements to post contracts on our website via the link to GLWA's Bonfire site.
4. Other complex contract management tasks, such as Construction Change Directives (CCD), can also be aligned with the Bonfire program.

The negotiated fee per seat (user) is \$3,900. GLWA's annual cost for 30 users is \$117,000. There is no charge for training and implementation. The contract is for one year with two one-year extensions at GLWA's discretion at the same rate. The fee negotiated for GLWA members and affiliates is \$4,500 per user with a minimum of five users.

The implementation timeline is below.

- February 2018 – Data gathering and project planning
- March 2018 - Contract signed
- March/April 2018 – Configuration, Procurement Group training, testing, and piloting
- April/May 2018 – Internal and external stakeholder training and communications including a Vendor Outreach event (Date TBD)
- June 2018 – Complete launch
- July 2018+ - Stakeholder feedback, continuous improvement (Plan-Do-Check-Act), and rollout of lower priority features

Attached is a case study from a public-sector Bonfire client. On page three of that case study is a link to a short minute video which provides a brief view of Bonfire (<https://bonfire.wistia.com/medias/hdtgn1so2w>).

We will continue to provide updates as the important initiative rolls out.

**Recommendation:** Receive and file report.

# Supercharging RFP submission and evaluation efficiency



## Customer Success Story

## Metropolitan Transportation Commission

When the number of projects is growing faster than your team's resources, you need to become more efficient and effective. MTC knew their existing hard-copy submission and paper-based scoring processes were holding them back. With Bonfire, MTC streamlined their submission and RfX evaluation to slash project times, improve operational efficiencies, and **make better decisions with confidence.**



### METROPOLITAN TRANSPORTATION COMMISSION

#### Organization Profile

Metropolitan Transportation Commission (MTC) is the transportation planning, financing and coordinating agency for the nine-county San Francisco Bay Area. MTC supports the roads, transit systems, airports and other transportation resources that help the region's seven million residents and visitors get to where they need to be.



#### Key Challenges:

Entirely hard-copy and Excel-based processes

Offline and time-consuming scoring and aggregation

Increasing pressure on team to 'do more with less'



#### Solution:

Implemented Bonfire to streamline their procurement activities, enable easier and more powerful evaluation processes, and bolster their data and reporting capabilities.



#### Impact & Results:

Elimination of hard-copy and manual processes

Improved efficiency and effectiveness of team

200% faster project cycles versus old process

## Procurement at MTC before Bonfire

The Contracts group at MTC manages all the competitive bidding and RFX projects for the agency, serving the San Francisco Bay Area. This includes over 75 RFPs and many more lower-spend solicitations and projects. It is the team's responsibility to the agency to deliver the best value for public funds, ensure open opportunity to bid, be as efficient as possible, and maintain perfect compliance to applicable local, state, and federal laws.

In late 2015, the Executive Office tasked the Contracts team with improving the efficiency of their procurement process. It was clear to Denise Rodrigues [Assistant Director, Contracts Compliance Manager], Michael Brinton [Principal, Contracts Manager] and the rest of the Contracts team that their existing manual, paper-based processes were no longer sustainable.

"We have a very small team relative to the volume of procurements and contracts" states Brinton. "In our old method, everything was via paper... Our confidentiality and conflict of interest statements were signed via paper. We had a paper-based evaluation scorecard, where the evaluation panel members would have to fill out their scores and handwrite out their notes." Scores and comments were manually aggregated and tabulated in Excel, along with frequent in-person consensus meetings to follow.

Not only was this existing process creating operational hurdles, it also made responding to public information requests a difficult and time-consuming challenge.

“

**"In our old method, everything was via paper..."**

**We needed some way to deal with it."**

- Michael Brinton,  
Contracts Manager, MTC

”

## Finding the right software

The team at MTC began exploring their options, looking for a software platform that would help their procurement activities become more effective and efficient.

With the rise in project volume, they needed to be able to run more projects in less time with the same amount of resources. More specifically, they needed software that not only streamlined their activities and handled complex RFP evaluations, but was also incredibly easy to use, reliable, and stable for their use.

Another requirement was for the software to help the agency respond to public data and information requests, and make it easier for the Contracts group to find, gather, and share relevant project information as needed.

Implementation of the platform needed to be simple and straightforward, with stakeholders able to learn and become proficient in the system quickly and without major disruptions or extensive training.



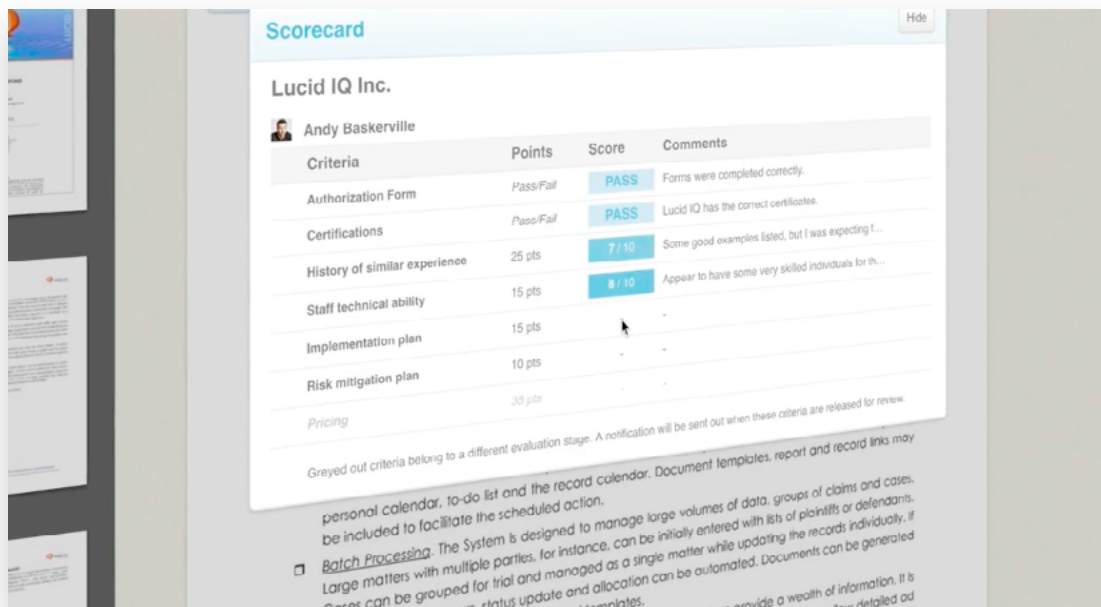
## Choosing Bonfire

Many of the options that Denise, Michael, and the team evaluated had individual components of what they were looking for, but ultimately they lacked the full functionality, ease of use for all users, and the modern look and feel they wanted.

“The way that the [first] demonstration was run, we could tell that [Bonfire] was going to be really easy for us to adopt: not a whole lot of training to do, it was intuitive”.

In particular, Bonfire’s PDF evaluation features had the potential to significantly improve their evaluation efficiency. Bonfire’s ability to bring their submissions online, structure their solicitation data, streamline their activities, and allow evaluators to review, score, and apply justifications all in a single place were all crucial features for MTC.

Bonfire would eliminate the inefficient and manual hard-copy processes, improving the efficiency of data and scoring management, the effectiveness of evaluator panel meetings, and overall slash project times to allow the team to tackle the growing number of procurement projects coming their way.



*See Bonfire's evaluation tools, for yourself, including PDF evaluation.*

[Watch the video here!](#)

This is an example of what PDF evaluation looks like in Bonfire. This powerful evaluation tool allows your evaluation team to review, score and provide justifications - all in one place.

“

“I couldn’t imagine the implementation process **being any simpler.**”

- Michael Brinton, Contracts Manager, MTC

”

## Getting Started with Bonfire

"I couldn't imagine the implementation process being any simpler" states Brinton.

The team at MTC was up to speed and proficient in Bonfire almost immediately. "It usually only takes about one time experiencing the whole Bonfire process... We walk [new team members] through one project, and they're off on their own".

Suppliers have also given Bonfire "universal positive feedback and acceptance". In a recent satisfaction survey, the MTC supplier community on average scored Bonfire's 'ease of use' as a 9.5/10, system stability as 9.5/10, and indicated average cost savings of approximately \$200 to over \$500 per submission.

## Bonfire's impact at MTC

The impact of Bonfire at MTC has been significant. Project times have been slashed by as much as 200%, allowing the team to run complex RFPs in about a month versus the 60-90 days required by their old process.

Operationally, Bonfire has enabled the team to be more consistent across all projects and team members: not only are projects run more efficiently, but project setup, documents, and reporting are now more highly organized and consistent.

"It's really the ease of use, the utility of [Bonfire], the reliability of it, and how much quicker it is for the project manager to get from evaluation to signing a contract. It's made things more efficient" says Brinton.

Bonfire has also had an impact beyond the performance gains of their procurement projects: Bonfire has also helped to increase the confidence in what the agency is doing from a procurement perspective. According to Brinton, "Bonfire has been a really big success for us".

**"Bonfire does more than we expected it to do, and still has more potential to change the way we do things."**



**200%**  
faster projects

*Using Bonfire, MTC was able to complete RFPs in approximately 1/3 of the time of their old process - down from 60-90 days to approximately 30 days.*



Learn how easier collaboration, richer data, and deeper automation can transform your procurement:

[GoBonfire.com](https://www.gobonfire.com)  
[Hello@GoBonfire.com](mailto:Hello@GoBonfire.com)  
800-354-8010



**Financial Services  
Audit Committee Communication**

**INFORMATION**

Item 10 A - City of Detroit Water and Sewerage Department Audited Financial Report FYE  
June 30, 2017

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# City of Detroit Water and Sewerage Department

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**Financial Report  
with Supplemental Information  
June 30, 2017**

|  |      |
|--|------|
| <b>Independent Auditor's Report</b>  | 1-2  |
| <b>Basic Financial Statements</b>  |      |
| Department Financial Statements:   |      |
| Statement of Net Position  | 3    |
| Statement of Revenue, Expenses, and Changes in Net Position                        | 4    |
| Statement of Cash Flows  | 5-6  |
| Notes to Financial Statements  | 7-28 |
| <b>Required Supplemental Information</b>   | 29   |
| Schedule of Changes in the Net Pension Liability and Related Ratios - Component II | 30   |
| Schedule of Changes in the Net Pension Liability and Related Ratios - Component I  | 31   |
| Schedule of Pension Contributions - Component II                                   | 32   |
| Schedule of Pension Contributions - Component I                                    | 33   |
| Note to Required Supplemental Information  | 34   |



## Independent Auditor's Report

To the Board of Water Commissioners, the Honorable Mayor, and Members of the City Council  
City of Detroit Water and Sewerage Department

### Report on the Financial Statements

We have audited the accompanying financial statements of the Water Fund and Sewage Disposal Fund of the City of Detroit, Michigan as of and for the year ended June 30, 2017, and the related notes to the financial statements, which collectively comprise the City of Detroit Water and Sewerage Department's (the "DWSD" or the "Department") basic financial statements, as listed in the table of contents.

### Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### Auditor's Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Water Fund and Sewage Disposal Fund of the City of Detroit, Michigan as of June 30, 2017 and the changes in their financial position and cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

### Emphasis of Matter

As described in Note 1 to the financial statements, effective January 1, 2016, the City of Detroit, Michigan entered into lease agreements and related service agreements with the Great Lakes Water Authority (GLWA) under which GLWA will operate the regional water and sewage system for the term of 40 years. The Department has continued to negotiate some of the final issues concerning the transaction, resulting in the recognition of a special item (bifurcation loss) in the statement of revenue, expenses, and changes in net position. Our opinion is not modified with respect to this matter.

To the Board of Water Commissioners, the Honorable Mayor, and Members of the City Council  
City of Detroit Water and Sewerage Department

We draw attention to Note 1, which explains that these financial statements present only the Water Fund and Sewage Disposal Fund and do not purport to, and do not, present fairly the financial position of the City of Detroit, Michigan as of June 30, 2017 or the changes in its financial position and the changes in its cash flows, where applicable thereof, for the year then ended in conformity with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

#### **Other Matters**

##### *Required Supplemental Information*

Accounting principles generally accepted in the United States of America require that the pension system schedules, as identified in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, which considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplemental information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Management has omitted management's discussion and analysis that accounting principles generally accepted in the United States of America require to be presented to supplement the basic financial statements. Such missing information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, which considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. Our opinion on the basic financial statements is not affected by this missing information.

##### **Other Reporting Required by Government Auditing Standards**

In accordance with *Government Auditing Standards*, we have also issued our report dated January 26, 2018 on our consideration of the City of Detroit, Michigan's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements, and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the City of Detroit, Michigan's internal control over financial reporting and compliance.

*Plante & Morse, PLLC*

January 26, 2018



# City of Detroit Water and Sewerage Department

## Statement of Net Position

June 30, 2017

|  | Water Fund     | Sewage Disposal Fund | Total            |
|--|----------------|----------------------|------------------|
| <b>Assets</b>  |                |                      |                  |
| Current assets:  |                |                      |                  |
| Cash   | \$ 2,043,278   | \$ 21,211,138        | \$ 23,254,416    |
| Receivables:   |                |                      |                  |
| Customer receivables   | 10,052,929     | 51,439,885           | 61,492,814       |
| Unbilled accounts receivable   | 6,822,918      | 18,905,877           | 25,728,795       |
| Other receivables  | 1,279,594      | 1,203,523            | 2,483,117        |
| Receivable from the Great Lakes Water Authority  | 14,352,159     | 15,003,717           | 29,355,876       |
| Due from other funds   | 12,649,655     | 3,498,594            | 16,148,249       |
| Due from city funds  | 23,485,679     | 3,202,418            | 26,688,097       |
| Inventory  | 4,171,425      | 1,053,886            | 5,225,311        |
| Prepaid expenses and other assets  | 279,533        | 169,728              | 449,261          |
| Total current assets   | 75,137,170     | 115,688,766          | 190,825,936      |
| Noncurrent assets:   |                |                      |                  |
| Restricted cash and investments (Note 3)   | 88,025,572     | 22,632,710           | 110,658,282      |
| Capital assets: (Note 4)   |                |                      |                  |
| Assets not subject to depreciation   | 10,761,378     | 10,241,982           | 21,003,360       |
| Assets subject to depreciation - Net   | 504,257,391    | 475,783,534          | 980,040,925      |
| Receivable from Great Lakes Water Authority  | 470,073,829    | 592,268,406          | 1,062,342,235    |
| Total noncurrent assets  | 1,073,118,170  | 1,100,926,632        | 2,174,044,802    |
| Total assets   | 1,148,255,340  | 1,216,615,398        | 2,364,870,738    |
| <b>Deferred Outflows of Resources - Deferred pension costs (Note 8)</b>                  | 11,546,948     | 8,339,579            | 19,886,527       |
| <b>Liabilities</b>   |                |                      |                  |
| Current liabilities:   |                |                      |                  |
| Accounts payable   | 4,124,474      | 1,532,828            | 5,657,302        |
| Due to Great Lakes Water Authority   | 32,908,024     | 83,522,445           | 116,430,469      |
| Due to other funds   | 3,498,594      | 12,649,655           | 16,148,249       |
| Due to city funds  | 13,560,888     | 13,107,885           | 26,668,773       |
| Deposits   | 2,653,454      | -                    | 2,653,454        |
| Accrued liabilities and other  | 10,415,000     | 12,069,349           | 22,484,349       |
| Accrued interest   | 1,901,626      | 3,169,374            | 5,071,000        |
| Current portion of compensated absences (Note 5)   | 869,376        | 1,304,065            | 2,173,441        |
| Accrued workers' compensation and claims and judgments (Note 7)                          | 299,198        | 3,283,244            | 3,582,442        |
| Current portion of bonds payable and contractual obligations (Note 5)                    | 11,468,789     | 11,036,337           | 22,505,126       |
| Total current liabilities  | 81,699,423     | 141,675,182          | 223,374,605      |
| Noncurrent liabilities:  |                |                      |                  |
| Compensated absences - Net of current portion (Note 5)                                   | 586,371        | 879,556              | 1,465,927        |
| Accrued workers' compensation and claims and judgments - Net of current portion (Note 7) | 3,365,412      | 12,506,539           | 15,871,951       |
| Net pension liability (Note 8)   | 50,867,232     | 35,306,922           | 86,174,154       |
| Net OPEB obligation (Note 9)   | 353,571        | 327,300              | 680,871          |
| Bonds payable and contractual obligations - Net of current portion (Note 5)              | 540,691,365    | 405,555,241          | 946,246,606      |
| Total noncurrent liabilities   | 595,863,951    | 454,575,558          | 1,050,439,509    |
| Total liabilities  | 677,563,374    | 596,250,740          | 1,273,814,114    |
| <b>Deferred Inflows of Resources - Deferred pension costs (Note 8)</b>                   | 677,014        | 962,247              | 1,639,261        |
| <b>Net Position</b>  |                |                      |                  |
| Net investment in capital assets   | 40,523,725     | 120,923,226          | 161,446,951      |
| Restricted:  |                |                      |                  |
| Improvements and extensions  | 36,425,536     | 12,446,072           | 48,871,608       |
| Budget stabilization   | 2,686,900      | 8,246,100            | 10,933,000       |
| Unrestricted   | 401,925,739    | 486,126,592          | 888,052,331      |
| Total net position   | \$ 481,561,900 | \$ 627,741,990       | \$ 1,109,303,890 |



# City of Detroit Water and Sewerage Department

## Statement of Revenue, Expenses, and Changes in Net Position

Year Ended June 30, 2017

|  | Water Fund            | Sewage Disposal Fund  | Total                   |
|--|-----------------------|-----------------------|-------------------------|
| <b>Operating Revenue</b>                                       |                       |                       |                         |
| Water sales and sewage disposal charges                        | \$ 93,480,965         | \$ 263,213,728        | \$ 356,694,693          |
| Shared services revenue  | 3,690,644             | 5,342,950             | 9,033,594               |
| Penalties and fees   | 5,265,229             | 4,617,148             | 9,882,377               |
| Miscellaneous  | 5,737,953             | 514,101               | 6,252,054               |
| Total operating revenue  | 108,174,791           | 273,687,927           | 381,862,718             |
| <b>Operating Expenses</b>                                      |                       |                       |                         |
| Salaries, wages, and benefits                                  | 18,063,778            | 27,759,759            | 45,823,537              |
| Contractual services   | 12,152,650            | 10,611,857            | 22,764,507              |
| Wholesale charges  | 15,490,300            | 187,304,100           | 202,794,400             |
| Operating  | 5,141,154             | 3,142,968             | 8,284,122               |
| Operating supplies   | 1,385,101             | 2,639,342             | 4,024,443               |
| Repairs and maintenance  | 3,132,815             | 997,103               | 4,129,918               |
| Utilities  | 745,105               | 603,340               | 1,348,445               |
| Shared services  | 5,342,838             | 8,219,449             | 13,562,287              |
| Miscellaneous  | 7,788,875             | 374,789               | 8,163,664               |
| Claims and judgments   | 1,743,976             | 16,015,429            | 17,759,405              |
| Bad debt   | 8,310,263             | 27,475,720            | 35,785,983              |
| Depreciation   | 16,367,235            | 8,720,350             | 25,087,585              |
| Total operating expenses                                       | 95,664,090            | 293,864,206           | 389,528,296             |
| <b>Operating Income (Loss)</b>                                 | 12,510,701            | (20,176,279)          | (7,665,578)             |
| <b>Nonoperating Revenue (Expense)</b>                          |                       |                       |                         |
| Investment income  | 348,696               | -                     | 348,696                 |
| Loss on disposal of capital assets                             | -                     | (1,611,869)           | (1,611,869)             |
| Interest revenue on lease with the Great Lakes Water Authority | 17,091,402            | 20,889,507            | 37,980,909              |
| Principal forgiveness on state revolving fund loans            | 2,305,264             | -                     | 2,305,264               |
| Miscellaneous  | (589,367)             | 29,656                | (559,711)               |
| Interest expense, net of capitalized interest                  | (27,268,213)          | (21,129,052)          | (48,397,265)            |
| Total nonoperating expense                                     | (8,112,218)           | (1,821,758)           | (9,933,976)             |
| <b>Special Item - Bifurcation (Note 1)</b>                     | (85,895,242)          | (72,059,278)          | (157,954,520)           |
| <b>Change in Net Position</b>                                  | (81,496,759)          | (94,057,315)          | (175,554,074)           |
| <b>Net Position - Beginning of year</b>                        | 563,058,659           | 721,799,305           | 1,284,857,964           |
| <b>Net Position - End of year</b>                              | <u>\$ 481,561,900</u> | <u>\$ 627,741,990</u> | <u>\$ 1,109,303,890</u> |

# City of Detroit Water and Sewerage Department

## Statement of Cash Flows

Year Ended June 30, 2017

|  | Water Fund           | Sewage Disposal Fund | Total                 |
|--|----------------------|----------------------|-----------------------|
| <b>Cash Flows from Operating Activities</b>                                    |                      |                      |                       |
| Receipts from customers  | \$ 100,598,357       | \$ 228,138,629       | \$ 328,736,986        |
| (Payments to) receipts from interfund services and reimbursements              | (5,471,117)          | 5,471,117            | -                     |
| (Payments to) receipts from city funds   | (7,370,457)          | 2,002,094            | (5,368,363)           |
| Payments to suppliers  | (14,362,834)         | (165,210,718)        | (179,573,552)         |
| Payments to employees and fringes  | (20,785,758)         | (30,541,846)         | (51,327,604)          |
| Claims paid  | (509,076)            | (261,843)            | (770,919)             |
| Net cash and cash equivalents provided by operating activities                 | 52,099,115           | 39,597,433           | 91,696,548            |
| <b>Cash Flows from Noncapital Financing Activities</b>                         |                      |                      |                       |
| Receipts from GLWA for financial recovery bonds                                | 1,020,118            | 2,294,569            | 3,314,687             |
| Principal and interest paid on operating debt                                  | (1,493,702)          | (2,489,502)          | (3,983,204)           |
| Receipts on GLWA contract receivable   | 22,500,000           | 27,500,000           | 50,000,000            |
| Net cash and cash equivalents provided by noncapital financing activities      | 22,026,416           | 27,305,067           | 49,331,483            |
| <b>Cash Flows from Capital and Related Financing Activities</b>                |                      |                      |                       |
| Issuance of bonds  | 50,740,000           | -                    | 50,740,000            |
| Purchase of capital assets   | (15,075,673)         | (15,964,742)         | (31,040,415)          |
| Principal and interest paid on capital debt                                    | (48,556,606)         | (33,851,100)         | (82,407,706)          |
| Net cash and cash equivalents used in capital and related financing activities | (12,892,279)         | (49,815,842)         | (62,708,121)          |
| <b>Cash Flows from Investing Activities</b>                                    |                      |                      |                       |
| Interest received on investments   | 348,696              | -                    | 348,696               |
| Receipts from renting activities   | 7,510                | 29,656               | 37,166                |
| Net cash and cash equivalents provided by investing activities                 | 356,206              | 29,656               | 385,862               |
| <b>Net Increase in Cash and Cash Equivalents</b>                               | 61,589,458           | 17,116,314           | 78,705,772            |
| <b>Cash and Cash Equivalents - Beginning of year</b>                           | 28,479,392           | 26,727,534           | 55,206,926            |
| <b>Cash and Cash Equivalents - End of year</b>                                 | <b>\$ 90,068,850</b> | <b>\$ 43,843,848</b> | <b>\$ 133,912,698</b> |
| <b>Classification of Cash and Cash Equivalents</b>                             |                      |                      |                       |
| Cash and investments   | \$ 2,043,278         | \$ 21,211,138        | \$ 23,254,416         |
| Restricted cash  | 88,025,572           | 22,632,710           | 110,658,282           |
| <b>Total cash and cash equivalents</b>   | <b>\$ 90,068,850</b> | <b>\$ 43,843,848</b> | <b>\$ 133,912,698</b> |



# City of Detroit Water and Sewerage Department

## Statement of Cash Flows (Continued)

Year Ended June 30, 2017

|  | Water Fund           | Sewage<br>Disposal Fund | Total                |
|--|----------------------|-------------------------|----------------------|
| <b>Reconciliation of Operating Income (Loss) to Net Cash and Cash Equivalents from Operating Activities</b>  |                      |                         |                      |
| Operating income (loss)  | \$ 12,510,701        | \$ (20,176,279)         | \$ (7,665,578)       |
| Adjustments to reconcile operating income (loss) to net cash and cash equivalents from operating activities: |                      |                         |                      |
| Depreciation and amortization  | 16,367,235           | 8,720,350               | 25,087,585           |
| Changes in assets and liabilities:   |                      |                         |                      |
| Receivables  | 733,829              | (18,073,578)            | (17,339,749)         |
| Due to and from other funds  | (5,471,117)          | 5,471,117               | -                    |
| Due to and from city funds   | (7,370,457)          | 2,002,094               | (5,368,363)          |
| Inventories  | (3,071,182)          | 1,965,725               | (1,105,457)          |
| Prepaid and other assets   | 15,590               | (169,728)               | (154,138)            |
| Accrued liabilities and other  | 29,011,099           | 41,824,140              | 70,835,239           |
| Accounts payable   | 13,638,275           | 5,311,848               | 18,950,123           |
| Estimated claims liability   | 1,234,900            | 15,753,586              | 16,988,486           |
| Net pension or OPEB liability  | 6,806,912            | 5,360,662               | 12,167,574           |
| Deferrals related to pension   | (12,306,670)         | (8,392,504)             | (20,699,174)         |
| Total adjustments  | 39,588,414           | 59,773,712              | 99,362,126           |
| Net cash and cash equivalents provided by operating activities   | <u>\$ 52,099,115</u> | <u>\$ 39,597,433</u>    | <u>\$ 91,696,548</u> |

June 30, 2017

**Note 1 - Nature of Business and Significant Accounting Policies**

***Reporting Entity***

The City of Detroit, Michigan (the "City") Charter established the Detroit Water and Sewerage Department (the "DWSD" or the "Department") in 1836 to supply water, drainage, and sewage services within and outside the City. The Department is governed by a seven-member Board of Water Commissioners (the "Board") that is appointed by the mayor of the City of Detroit, Michigan. In accordance with government accounting principles, there are no separate legal entities to be reported within these financial statements. The financial statements of the Department have been included in the City's Comprehensive Annual Financial Report and reported as enterprise funds. These financial statements represent the financial condition and the results of operations of the Department only and do not purport to, and do not, present fairly the financial position of the City. Copies of these reports, along with other financial information, can be obtained at the Department's administrative office located at 735 Randolph, Detroit, Michigan 48226 and on its website at [www.detroitmi.gov/dwsd](http://www.detroitmi.gov/dwsd).

The Board's governance structure, authority, and level of operational autonomy is established by five standing federal court orders dated September 9, 2011 (Creation of the Root Cause Committee); November 4, 2011 (Adoption of the Root Cause Committee Plan of Action); October 5, 2012 (Clarification of the November 4, 2011 Order); December 14, 2012 (Adoption of Root Cause Committee's Plan of Action Clarification); and December 15, 2015 (Opinion & Order on Joint Motion for Relief of Judgment). These court orders resulted largely from federal court oversight of the DWSD for most of the time from May 6, 1977 through March 27, 2013 related to alleged violations of the Clean Water Act and its National Pollutant Discharge Elimination System (NPDES) permit. The final court order reiterated that the court retains limited jurisdiction for the purpose of enforcement of its orders issued on September 9, 2011, November 4, 2011, October 5, 2012, December 14, 2012, and December 15, 2015.

Authority granted by the federal court to the DWSD includes operational independence in the areas of law, finance, human resources, and procurement. Specifically, while they restored some provisions in the Charter relating to the appointment and removal of members of the Board, these orders enjoined the City from applying any existing or future charter provisions, ordinances, resolutions, executive orders, city policies, regulations, procedures, or similar rules or practices that are inconsistent with the express terms of the court's orders. Further the orders granted the DWSD the authority to: purchase its own information technology systems; establish its own subunits and programs within its finance division, including debt management, accounts payable, accounts receivable, accounting, budget, and to establish new rates and charges; treasury and cash management, asset management, and deferred compensation; independence from city finance policies; be exempt from the application of city ordinances, the City's human resources policies and regulations, Civil Service Commission Rules, and city resolutions and orders, pertaining to payroll, employee benefits, and employee and labor relations; establish bank accounts in its own name; and establish its own self-insurance fund.

Effective January 1, 2016, the City of Detroit, Michigan entered into lease agreements and related service agreements with the Great Lakes Water Authority (GLWA) under which GLWA will operate the regional water and sewage system for the term of 40 years (with automatic extension to coincide with any debt still outstanding that was issued to finance system improvements). The agreements transfer all then-outstanding bonded indebtedness to GLWA, along with a leasehold interest in certain capital assets, cash, investments, and receivables in exchange for an annual lease payment of \$50 million.

The GLWA bonds are supported by a pledge of the revenue of both the regional system and local system revenue. Its master bond ordinance requires collections of the Department's water and sewer receipts to be deposited into trust accounts controlled by the master bond ordinance (through GLWA), which will be used to fund wholesale operation and maintenance costs, debt principal and interest, pension obligations, the Water Residential Assistance Program, and the budget stabilization fund, after distributing cash sufficient to cover the local operation and maintenance costs to the Department; any remaining monies are transferred to an improvement and extension fund.



**June 30, 2017****Note 1 - Nature of Business and Significant Accounting Policies (Continued)*****Accounting and Reporting Principles***

The City of Detroit Water and Sewerage Department follows accounting principles generally accepted in the United States of America (GAAP) as applicable to governmental units. Accounting and financial reporting pronouncements are promulgated by the Government Accounting Standards Board. The following is a summary of the significant accounting policies used by the Department:

***Fund Accounting***

The Department accounts for its various activities in two different funds in order to demonstrate accountability for how it has spent its resources; separate funds allow us to show the particular expenditures for which specific revenue was used.

***Proprietary Funds***

Proprietary funds include enterprise funds (which provide goods or services to users in exchange for charges or fees). The Department reports the following two funds:

- The Water Fund accounts for the operations of the water distribution system. The fund provides services to retail customers located in the City of Detroit, Michigan.
- The Sewage Disposal Fund accounts for the operations of the sewers, including sanitary and combined sewers. The fund provides services to retail customers located in the City of Detroit, Michigan.

***Report Presentation***

This report includes the fund-based statements of the Department. In accordance with government accounting principles, a government-wide presentation with program and general revenue is not applicable to special purpose governments engaged only in business-type activities.

***Basis of Accounting***

The Water Fund and Sewage Disposal Fund use the economic resources measurement focus and the full accrual basis of accounting. Revenue is recorded when earned and expenses are recorded when a liability is incurred regardless of the timing of related cash flows. Nonexchange revenue (grants and contributions) are recognized when all eligibility requirements have been satisfied (generally based on reimbursements of amounts spent).

***Specific Balances and Transactions******Cash and Cash Equivalents***

Cash and cash equivalents include cash on hand, demand deposits, and short-term investments with a maturity of three months or less when acquired.

***Investments***

Investments are reported at fair value or estimated fair value based on quoted market prices.

***Receivables***

All customer receivables are shown net of allowance for uncollectible amounts of \$12,174,486 and \$38,829,685 in the Water Fund and Sewage Disposal Fund, respectively.

June 30, 2017

**Note 1 - Nature of Business and Significant Accounting Policies (Continued)****Inventories and Prepaid Items**

Inventories consist of operating and maintenance and repair parts for water and sewer assets and are valued at the lower of cost or market, with cost being determined on an average cost method. Inventory is recorded as expenditures when consumed rather than when purchased. Certain payments to vendors reflect costs applicable to future fiscal years and are recorded as prepaid items.

**Capital Assets**

Capital assets are recorded at historical cost, together with interest capitalized during construction. Capital assets are defined by the Department as assets with an initial individual cost of more than \$5,000 and an estimated useful life in excess of one year. All acquisitions of land and land improvements are capitalized regardless of cost. Donated capital assets are recorded at estimated acquisition value at the date of donation.

Interest incurred during the construction of capital assets of business-type activities is included as part of the capitalized value of the assets constructed.

Infrastructure, buildings, equipment, and vehicles are depreciated using the straight-line method over the following useful lives:

|                                       | Depreciable Life -<br>Years |
|---------------------------------------|-----------------------------|
| Land improvements                     | 67 years                    |
| Buildings and structures              | 40 years                    |
| Distribution mains                    | 67 years                    |
| Services and meters                   | 20-67 years                 |
| Sewers                                | 67-100 years                |
| Machinery, equipment, and<br>fixtures | 3-20 years                  |

The Department capitalizes qualifying net interest costs of the system on bonds issued for capital construction in accordance with GASB Statement No. 62, *Capitalization of Interest Cost*, as amended. Accordingly, capitalized interest for the year ended June 30, 2017 was \$939,151 for the Water Fund. There was no capitalized interest recognized in the Sewage Disposal Fund in fiscal year 2017.

Construction in progress is related to buildings, improvements, or infrastructure that has not yet been placed in service for the intended use. These costs include contract costs (materials, labor, and overhead) as well as professional fees and interest incurred during the construction period. Upon completion, construction in progress costs are transferred to the appropriate capital asset classification. A periodic review of projects included in construction in progress identified projects that were suspended or canceled during the period. These identified projects were removed from construction in progress and recorded as operations and maintenance costs.

**Taxes and City Services**

The Department pays no direct federal, state, or local taxes, except local taxes on excess property and federal Social Security taxes. The Department reimburses the City for most of the direct services furnished by other city departments, including general staff services. Charges are billed for all water and sewerage services provided to city departments.

**Shared Costs**

Costs related to shared facilities and personnel are allocated to the Department on a basis that relates costs incurred to the fund benefited.



**June 30, 2017****Note 1 - Nature of Business and Significant Accounting Policies (Continued)****Compensated Absences**

The liability for compensated absences reported in the basic financial statements consists of unpaid, accumulated vacation and sick leave balances. The liability has been calculated using the vesting method, in which leave amounts for both employees who are currently eligible to receive termination payments and other employees who are expected to become eligible in the future to receive such payments upon termination are included. Vacation leave is accrued as benefits are earned by employees and it is probable that the City will compensate the employees for the benefits through paid time off or other means, such as cash payments at termination or retirement. The liability has been calculated based on employees' current salary level and includes salary-related costs (e.g., Social Security and Medicare tax). The current year accruals are based on estimates, and payments are based on actuals.

**Bond Premiums, Discounts, and Deferred Amounts on Refunding**

Bond premiums and discounts are amortized using the effective interest method, and deferred amounts on refunding are amortized using the straight-line method over the life of the bonds. Bonds payable are reported net of the applicable bond premium and discounts. Deferred amounts on refunding are reported as deferred outflows and deferred inflows of resources.

**Long-term Obligations**

In accordance with contractual agreements with GLWA, the Department continues to be responsible for funding its share of the GLWA bonds that are estimated to have been used to improve the local DWSD system. The Department has been assigned a portion of the City of Detroit, Michigan's financial recovery bonds, which had been used to fund prebankruptcy operating obligations. There are also outstanding revenue bonds and state revolving fund loans at year end. All of these amounts are reported as long-term obligations in the statement of revenue, expenses, and changes in net position.

**Deferred Outflows/Inflows of Resources**

In addition to assets, the statement of net position will sometimes report a separate section for deferred outflows of resources. This separate financial statement element represents a consumption of net position that applies to a future period and so will not be recognized as an outflow of resources (expense) until then. The Department has one item that qualifies for reporting in this category. The item is the deferred outflows of resources related to the City's defined benefit pension plan reported in both the Water Fund and Sewage Disposal Fund. The deferred outflows of resources related to the defined benefit pension plan result from three transactions: contributions to the defined benefit pension plan subsequent to June 30, 2016, the variance between the plan's actual investment earnings compared to the plan's assumed investment earnings, and changes in assumptions related to economic and demographic factors. The amounts deferred for changes in assumptions are amortized over the expected remaining service lives of all active and inactive employees who are provided with pensions. The amounts deferred resulting from the variance between actual investment earnings and assumed investment earnings are amortized over a closed five-year basis.

In addition to liabilities, the statement of net position will sometimes report a separate section for deferred inflows of resources. This separate financial statement element represents an acquisition of net position that applies to a future period and so will not be recognized as an inflow of resources (revenue) until that time. The Department has one item that qualifies for reporting in this category. The item is the deferred inflows of resources related to the City's defined benefit pension plan reported in both the Water Fund and Sewage Disposal Fund. The deferred inflows of resources related to the defined benefit pension plan result from two transactions: differences between expected and actual experience and changes in assumptions related to economic and demographic factors. These amounts are amortized over the expected remaining service lives of all active and inactive employees who are provided with pensions.



June 30, 2017

**Note 1 - Nature of Business and Significant Accounting Policies (Continued)**

**Net Position**

The Department's net position is categorized as follows:

**Net Investment in Capital Assets** - This consists of capital assets, net of accumulated depreciation, and net of capital-related debt.

**Restricted** - The net position has been legally restricted by outside parties or by law through constitutional provisions or enabling legislation.

**Unrestricted** - This consists of assets that do not meet the definition of "restricted" or "net investment in capital assets."

**Net Position Flow Assumption**

Sometimes, the Department will fund outlays for a particular purpose from both restricted (e.g., restricted bond or grant proceeds) and unrestricted resources. In order to calculate the amounts to report as restricted net position and unrestricted net position in the Department's financial statements, a flow assumption must be made about the order in which the resources are considered to be applied. It is the Department's policy to consider restricted net position to have been depleted before unrestricted net position is applied.

**Unbilled Revenue**

The Department records unbilled revenue for services provided by the DWSD prior to year end by accruing actual revenue billed in the subsequent month.

**Interest Expense**

Interest expense in the statement of revenue, expenses, and changes in net position includes amounts related to the portion of rates and charges collected by the DWSD which relate to the accretion of obligations payable to the Great Lakes Water Authority in respect to the interest payable on GLWA's bonds and interest paid and accrued on outstanding financial recovery bonds, revenue bonds, and state revolving fund loans.

**Classification of Revenue and Expenses**

The Department classifies its revenue and expenses as either operating or nonoperating.

Operating revenue includes activities that have the characteristics of exchange transactions, such as revenue from charges for water service and sewerage services.

Nonoperating revenue includes activities that have the characteristics of nonexchange transactions, such as contributions and investment income.

Operating expenses include the costs of operating the water and sewer utility systems, administrative expenses, and depreciation on capital assets. All expenses not meeting this definition, including interest expense, are reported as nonoperating expenses.

**Use of Estimates**

The preparation of basic financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the basic financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

As of June 30, 2017, several of the Department's accounts were subject to significant estimates as a result of the leasing of assets to the Great Lakes Water Authority and are still pending negotiations.



**June 30, 2017****Note 1 - Nature of Business and Significant Accounting Policies (Continued)****Special Item - Bifurcation**

On January 1, 2016, the City of Detroit, Michigan, effectuated a lease agreement with the Great Lakes Water Authority for the regional water system for the term of 40 years, to be extended automatically to coincide with the final maturity of any bonds issued to finance improvements to the regional or local water systems. The service agreement and a corresponding lease of the regional water and sewer system collectively provide for an annual lease payment of \$50 million (of which \$22,500,000 is currently allocated to the Water Fund and \$27,500,000 is currently allocated to the Sewage Disposal Fund) in exchange for a leasehold interest in the Water and Sewer System's water treatment plants, wastewater treatment plant, certain public sewers, wastewater interceptors, transmission lines, and certain other assets, including cash and investments held by the Department as of December 31, 2015, assignment of all revenue of the regional and local water systems, and the assumption of all the DWSD bonded debt and certain liabilities.

The Department has continued to negotiate some of the final issues concerning the bifurcation, including the portion of the debt assumed by GLWA that was utilized for local system improvements, whose debt will continue to be funded by the Department. As a result of these negotiations, the Department has adjusted the recognition of the gain from the bifurcation in the current year by \$85,895,242 in the Water Fund and \$72,059,278 in the Sewage Disposal Fund.

**Upcoming Accounting Pronouncements**

In June 2015, the GASB issued Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other than Pensions*, which addresses reporting by governments that provide postemployment benefits other than pensions (OPEB) to their employees and for governments that finance OPEB for employees of other governments. This OPEB standard will require the Department to recognize on the face of the financial statements its proportionate share of the City's net OPEB liability related to its participation in the supplemental death benefit plan. The Department is currently evaluating the impact this standard will have on the financial statements when adopted. The provisions of this statement are effective for the Department's financial statements for the year ending June 30, 2018.

In November 2016, the Governmental Accounting Standards Board issued GASB Statement No. 83, *Certain Asset Retirement Obligations*, which establishes criteria for determining the timing and pattern of recognition of a liability and a corresponding deferred outflow of resources for asset retirement obligations. The Department is currently evaluating the impact this standard will have on the financial statements when adopted. The provisions of this statement are effective for the Department's financial statements for the 2019 fiscal year.

In June 2017, the Governmental Accounting Standards Board issued GASB Statement No. 87, *Leases*, which improves accounting and financial reporting for leases by governments. This statement requires recognition of certain lease assets and liabilities for leases that were previously classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources. The Department is currently evaluating the impact this standard will have on the financial statements when adopted. The provisions of this statement are effective for the Department's financial statements for the year ending June 30, 2021.



June 30, 2017

**Note 2 - Deposits and Investments**

Deposits and investments are reported in the financial statements as follows:

|   | Water Fund           | Sewage<br>Disposal Fund | Total                 |
|---|----------------------|-------------------------|-----------------------|
| Cash - Unrestricted   | \$ 2,043,278         | \$ 21,211,138           | \$ 23,254,416         |
| Restricted cash   | 85,802,617           | 20,446,437              | 106,249,054           |
| Restricted investments - External investment pool<br>valued at amortized cost | 2,222,955            | 2,186,273               | 4,409,228             |
| Total cash and investments  | <u>\$ 90,068,850</u> | <u>\$ 43,843,848</u>    | <u>\$ 133,912,698</u> |

Michigan Compiled Laws Section 129.91 (Public Act 20 of 1943, as amended) authorizes local governmental units to make deposits and invest in the accounts of federally insured banks, credit unions, and savings and loan associations that have offices in Michigan. The law also allows investments outside the state of Michigan when fully insured. The local unit is allowed to invest in bonds, securities, and other direct obligations of the United States or any agency or instrumentality of the United States; repurchase agreements; bankers' acceptances of United States banks; commercial paper rated within the two highest classifications, which matures not more than 270 days after the date of purchase; obligations of the State of Michigan or its political subdivisions, which are rated as investment grade; and mutual funds composed of investment vehicles that are legal for direct investment by local units of government in Michigan.

There are no limitations or restrictions on participant withdrawals for the investment pools that are recorded at amortized cost.

The Department's cash and investments are subject to several types of risk, which are examined in more detail below:

***Custodial Credit Risk of Bank Deposits***

Custodial credit risk is the risk that in the event of a bank failure, the Department's deposits may not be returned to it. The Department does not have a deposit policy for custodial credit risk. At year end, the Department had \$54,399,204 of bank deposits (certificates of deposit and checking and savings accounts) that were uninsured and uncollateralized. The Department believes that due to the dollar amounts of cash deposits and the limits of FDIC insurance, it is impractical to insure all deposits. As a result, the Department evaluates each financial institution with which it deposits funds and assesses the level of risk of each institution; only those institutions with an acceptable estimated risk level are used as depositories.

***Custodial Credit Risk of Investments***

Custodial credit risk is the risk that, in the event of the failure of the counterparty, the Department will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. The Department does not have a policy for custodial credit risk. As of June 30, 2017, the Department had no investments subject to custodial credit risk.

***Interest Rate Risk***

Interest rate risk is the risk that the value of investments will decrease as a result of a rise in interest rates. The Department's investment policy does not restrict investment maturities other than commercial paper, which can only be purchased with a 270-day maturity. At year end, the Department had no investments subject to interest rate risk.

June 30, 2017

## Note 2 - Deposits and Investments (Continued)

### *Credit Risk*

State law limits investments in commercial paper to the top two ratings issued by nationally recognized statistical rating organizations. The Department has no investment policy that would further limit its investment choices. As of year end, the Department had no investments subject to credit risk.

## Note 3 - Restricted Assets

Restricted assets, principally cash and investments, are available for debt service revenue requirements on revenue bonds and to provide funds for improvements, enlargements, extensions, and construction.

At June 30, 2017, the restricted assets are as follows:

| Description  | 2017                 |                      | Total                 |
|--|----------------------|----------------------|-----------------------|
|  | Water Fund           | Sewage Disposal Fund |                       |
| Budget stabilization fund - Held in trust in accordance with the master bond ordinance | \$ 2,686,900         | \$ 8,246,100         | \$ 10,933,000         |
| Improvement and extension fund   | 36,425,536           | 12,446,072           | 48,871,608            |
| Donations, restricted for specified purposes   | 977,278              | -                    | 977,278               |
| Unspent bond proceeds  | 47,935,858           | 1,940,538            | 49,876,396            |
| Total  | <u>\$ 88,025,572</u> | <u>\$ 22,632,710</u> | <u>\$ 110,658,282</u> |



June 30, 2017

**Note 4 - Capital Assets**

Capital asset activity of the Department for the year ended June 30, 2017 was as follows:

|                                       | Balance<br>July 1, 2016 | Reclassifications<br>and Adjustments | Additions    | Disposals | Balance<br>June 30, 2017 |
|---------------------------------------|-------------------------|--------------------------------------|--------------|-----------|--------------------------|
| <b>Water Fund</b>                     |                         |                                      |              |           |                          |
| Capital assets not being depreciated: |                         |                                      |              |           |                          |
| Land and land rights                  | \$ 1,327,637            | \$ -                                 | \$ -         | \$ -      | \$ 1,327,637             |
| Construction in progress              | 17,619,205              | (22,748,276)                         | 15,289,523   | (726,711) | 9,433,741                |
| Subtotal                              | 18,946,842              | (22,748,276)                         | 15,289,523   | (726,711) | 10,761,378               |
| Capital assets being depreciated:     |                         |                                      |              |           |                          |
| Mains                                 | 486,555,427             | 18,473,296                           | 756,644      | -         | 505,785,367              |
| Buildings and structures              | 55,401,580              | 24,516                               | -            | -         | 55,426,096               |
| Machinery, equipment, and fixtures    | 76,705,703              | 6,492,663                            | -            | -         | 83,198,366               |
| Land improvements                     | 4,791,365               | -                                    | -            | -         | 4,791,365                |
| Services                              | 48,981,409              | -                                    | -            | -         | 48,981,409               |
| Meters                                | 126,143,066             | -                                    | -            | -         | 126,143,066              |
| Subtotal                              | 798,578,550             | 24,990,475                           | 756,644      | -         | 824,325,669              |
| Accumulated depreciation:             |                         |                                      |              |           |                          |
| Mains                                 | 126,567,898             | (627,384)                            | 7,226,703    | -         | 133,167,217              |
| Buildings and structures              | 41,224,437              | 129,438                              | 589,406      | -         | 41,943,281               |
| Machinery, equipment, and fixtures    | 37,037,801              | 4,455,990                            | 2,994,972    | -         | 44,488,763               |
| Land improvements                     | 1,349,598               | (337,132)                            | 71,871       | -         | 1,084,337                |
| Services                              | 29,623,127              | (78,489)                             | 550,770      | -         | 30,095,408               |
| Meters                                | 64,815,323              | (459,564)                            | 4,933,513    | -         | 69,289,272               |
| Subtotal                              | 300,618,184             | 3,082,859                            | 16,367,235   | -         | 320,068,278              |
| Net capital assets being depreciated  | 497,960,366             | 21,907,616                           | (15,610,591) | -         | 504,257,391              |
| Net water fund capital assets         | 516,907,208             | (840,660)                            | (321,068)    | (726,711) | 515,018,769              |

June 30, 2017

# Note 4 - Capital Assets (Continued)

## Business-type Activities (Continued)

|   | Balance<br>July 1, 2016 | Reclassifications<br>and Adjustments | Additions    | Disposals      | Balance<br>June 30, 2017 |
|---|-------------------------|--------------------------------------|--------------|----------------|--------------------------|
| <b>Sewage Disposal Fund</b>             |                         |                                      |              |                |                          |
| Capital assets not being depreciated:   |                         |                                      |              |                |                          |
| Land and land rights                    | \$ 72,326               | \$ -                                 | \$ -         | \$ -           | \$ 72,326                |
| Construction in progress                | 7,863,676               | (12,046,892)                         | 15,966,095   | (1,613,223)    | 10,169,656               |
| Subtotal                                | 7,936,002               | (12,046,892)                         | 15,966,095   | (1,613,223)    | 10,241,982               |
| Capital assets being depreciated:       |                         |                                      |              |                |                          |
| Sewer lines and laterals                | 382,779,563             | 10,766,939                           | -            | -              | 393,546,502              |
| Buildings and structures                | 107,816,579             | 427,287                              | -            | -              | 108,243,866              |
| Machinery, equipment, and fixtures      | 104,743,951             | 4,024,975                            | -            | -              | 108,768,926              |
| Land improvements                       | 6,696,440               | 195,443                              | -            | -              | 6,891,883                |
| Subtotal                                | 602,036,533             | 15,414,644                           | -            | -              | 617,451,177              |
| Accumulated depreciation:               |                         |                                      |              |                |                          |
| Sewer lines and laterals                | 37,660,560              | 1,080,290                            | 2,470,327    | -              | 41,211,177               |
| Buildings and structures                | 44,878,997              | 467,197                              | 1,837,023    | -              | 47,183,217               |
| Machinery, equipment, and fixtures      | 45,535,702              | 2,148,404                            | 4,311,490    | -              | 51,995,596               |
| Land improvements                       | 1,504,282               | (328,139)                            | 101,510      | -              | 1,277,653                |
| Subtotal                                | 129,579,541             | 3,367,752                            | 8,720,350    | -              | 141,667,643              |
| Net capital assets being depreciated    | 472,456,992             | 12,046,892                           | (8,720,350)  | -              | 475,783,534              |
| Net sewage disposal fund capital assets | 480,392,994             | -                                    | 7,245,745    | (1,613,223)    | 486,025,516              |
| Net department capital assets           | \$ 997,300,202          | \$ (840,660)                         | \$ 6,924,677 | \$ (2,339,934) | \$ 1,001,044,285         |

Construction in progress additions in the Water Fund include \$939,151 of interest costs that have been capitalized as part of the cost of assets.

## Construction Commitments

The Department is engaged in numerous projects that are part of its five-year capital improvement program, including water main replacements, fire hydrant replacements, sewer system rehabilitation, vehicle and equipment purchases, and information technology upgrades. The program is being financed primarily from revenue of the funds and proceeds from the issuance of revenue bonds by the Great Lakes Water Authority. The total amount of construction contract commitments outstanding at June 30, 2017 was approximately \$53 million and \$179 million for the Water Fund and Sewage Disposal Fund, respectively.



# City of Detroit Water and Sewerage Department

## Notes to Financial Statements

June 30, 2017

### Note 5 - Long-term Debt

Long-term debt activity of the Department for the year ended June 30, 2017 is summarized as follows:

|   | Interest Rate<br>Ranges | Principal<br>Maturity Ranges | Balance<br>June 30, 2016 | Additions      | Reductions      | Balance<br>June 30, 2017 | Due Within One<br>Year |
|---|-------------------------|------------------------------|--------------------------|----------------|-----------------|--------------------------|------------------------|
| <b>Water fund obligations payable and long-term debt:</b>             |                         |                              |                          |                |                 |                          |                        |
| Obligation payable to GLWA  | 5.01%                   | \$11,065,908 -<br>32,799,150 | \$ 395,639,923           | \$ 79,360,077  | \$ (10,970,221) | \$ 464,029,779           | \$ 11,065,908          |
| Financial recovery bonds  | 4-6%                    | \$272,639 -<br>1,327,003     | 29,988,910               | -              | (259,657)       | 29,729,253               | 272,639                |
| Revenue bonds   | 5%                      | \$3,205,000 -<br>7,260,000   | -                        | 50,740,000     | -               | 50,740,000               | -                      |
| State revolving loans   | 2.5%                    | \$95,000 -<br>195,000        | -                        | 1,268,474      | -               | 1,268,474                | -                      |
| Total principal outstanding on obligations payable and long-term debt |                         |                              | 425,628,833              | 131,368,551    | (11,229,878)    | 545,767,506              | 11,338,547             |
| Unamortized bond premiums on revenue bonds                            |                         |                              | -                        | 6,478,034      | (85,386)        | 6,392,648                | 130,242                |
| Total water fund obligations payable and long-term debt               |                         |                              | 425,628,833              | 137,846,585    | (11,315,264)    | 552,160,154              | 11,468,789             |
| Compensated absences  |                         |                              | 1,350,012                | 105,735        | -               | 1,455,747                | 869,376                |
| Workers' compensation and general claims                              |                         |                              | 489,624                  | 4,290,170      | (1,115,184)     | 3,664,610                | 299,198                |
| Total water fund long-term obligations                                |                         |                              | \$ 427,468,469           | \$ 142,242,490 | \$ (12,430,448) | \$ 557,280,511           | \$ 12,637,363          |
| <b>Sewage disposal fund obligations payable and long-term debt:</b>   |                         |                              |                          |                |                 |                          |                        |
| Obligation payable to GLWA  | 4.58%                   | \$10,581,938 -<br>25,609,942 | \$ 310,973,690           | \$ 64,026,310  | \$ (7,957,172)  | \$ 367,042,828           | \$ 10,581,938          |
| Financial recovery bonds  | 4-6%                    | \$454,399 -<br>2,211,672     | 49,981,511               | -              | (432,761)       | 49,548,750               | 454,399                |
| Total principal outstanding on obligations payable and long-term debt |                         |                              | 360,955,201              | 64,026,310     | (8,389,933)     | 416,591,578              | 11,036,337             |
| Compensated absences  |                         |                              | 2,025,017                | 158,604        | -               | 2,183,621                | 1,304,065              |
| Workers' compensation and general claims                              |                         |                              | 1,043,797                | 14,927,576     | (181,590)       | 15,789,783               | 3,283,244              |
| Total sewage disposal fund long-term obligations                      |                         |                              | \$ 364,024,015           | \$ 79,112,490  | \$ (8,571,523)  | \$ 434,564,982           | \$ 15,623,646          |

#### Obligation Payable to GLWA

As part of the lease transaction in which the City leased the regional water and sewer system of the DWSD to GLWA, all DWSD revenue bonds outstanding as of December 31, 2015, including those purchased by the Michigan Finance Authority under its state revolving loan program, were assumed by GLWA with the consent of bondholders.



**June 30, 2017****Note 5 - Long-term Debt (Continued)**

Per the Water and Sewer Services agreement between the DWSD and GLWA dated June 12, 2015 and the Master Bond Ordinances dated October 7, 2015, as amended, the Detroit retail class continues to pay its common-to-all share of debt service revenue requirements and its allocated share of debt service revenue requirements associated with improvements to the local water and sewer systems. Payments on the debt service incurred by GLWA on the outstanding revenue bonds assumed as of December 31, 2015 are to be allocated using an agreed-upon percentage of total debt service associated with bond financed local improvements over the life of such bonds, though the bonds themselves continue to be secured by the net revenue of GLWA, which includes all revenue payable by the Detroit retail class. As of June 30, 2017, the parties were still working to resolve the allocation percentage. Subsequent to June 30, 2017, the parties reached a tentative agreement on the debt allocation, subject to board approval. During 2017, as a result of continued negotiations on the allocation percentage, the DWSD revised its obligation payable to GLWA in the amount of \$79,360,077 and \$64,026,310 in the Water Fund and Sewage Disposal Fund, respectively. These amounts, along with other bifurcation-related adjustments, are recognized as a special item (bifurcation loss) in the statement of revenue, expenses, and changes in net position.

***Financial Recovery Bonds***

On December 10, 2014, the City issued approximately \$1.3 billion of debt. The Financial Recovery Bonds, Series 2014-B(1) and Series 2014-B(2) total \$616,560,047 and \$15,404,098, respectively. They are federally taxable. The bonds' interest rate is 4.0 percent per annum from December 10, 2014 through and including March 31, 2034 and 6.0 percent per annum thereafter until the maturity date of April 1, 2044. The bonds were delivered to classes of creditors in satisfaction of (1) Class 12 OPEB claims (the bonds were distributed to the new Voluntary Employee Beneficiary Associations (VEBA) for the general retirees and police and fire retirees), (2) Class 9 Pension Obligation Certificate (POC) claims, and (3) other unsecured bankruptcy claims.

The Financial Recovery Bonds, Series 2014-C total \$88,430,021. The bonds bear interest at 5.0 percent per annum. The bonds mature on December 10, 2026. The bonds are unsecured but city revenue from its parking garages will provide the required debt service. If the parking garage revenue is insufficient, then the City's General Fund will provide the necessary debt service funds. The 2014-C Bonds were issued as part of the Syncora Settlement and FGIC/POC Settlement in the plan and on the effective date. As part of the Plan of Adjustment, GLWA remains responsible to pay a portion of the debt; however, the entire debt remains in the City's name. The Department was allocated 11.21 percent and 11.55 percent of the Series 2014-B and Series 2014-C debt, respectively, of which GLWA's portion of that allocation is 71.42 percent and the DWSD's portion of that allocation is 28.58 percent. The Department has recorded a liability for the entire balance of the allocated debt and has also recorded a receivable from GLWA for the debt allocated to GLWA that will be reimbursed to the Department.

***Revenue Bonds***

During the year, GLWA issued revenue bonds, of which new money in the amount of \$50,740,000 was allocated to the DWSD. Proceeds from the bonds provided financing for improvements to the local water system. The bonds are secured by the net revenue of GLWA and the DWSD. GLWA's master bond ordinance requires collections of DWSD receipts to be deposited into trust accounts controlled by the master bond ordinance (through GLWA), which will be used, among other things, to fund debt principal and interest.

***State Revolving Fund Loans***

The Department (Water Fund) received loans from the State of Michigan Revolving Loan Fund totaling \$1,268,474 during the year ended June 30, 2017. The proceeds of the loans were used to pay costs of making certain repairs and improvements to the water system and are reported as a long-term liability on the statement of net position. The Department (Water Fund) also recorded nonoperating revenue in the amount of \$2,305,264 related to principal forgiveness on state revolving loans.



June 30, 2017

**Note 5 - Long-term Debt (Continued)****Debt Service Requirements to Maturity**

Annual debt service requirements to maturity for the above obligations and debt, excluding premiums on revenue bonds, are as follows:

| Years Ending<br>June 30 | Water Fund     |                |                | Sewage Disposal Fund |                |                |
|-------------------------|----------------|----------------|----------------|----------------------|----------------|----------------|
|                         | Principal      | Interest       | Total          | Principal            | Interest       | Total          |
| 2018                    | \$ 11,338,547  | \$ 27,049,768  | \$ 38,388,315  | \$ 11,036,337        | \$ 18,845,696  | \$ 29,882,033  |
| 2019                    | 12,131,602     | 26,488,851     | 38,620,453     | 10,935,310           | 18,338,323     | 29,273,633     |
| 2020                    | 12,734,607     | 25,883,498     | 38,618,105     | 11,438,151           | 17,835,482     | 29,273,633     |
| 2021                    | 13,372,821     | 25,247,935     | 38,620,756     | 11,964,123           | 17,309,510     | 29,273,633     |
| 2022                    | 14,042,758     | 24,580,528     | 38,623,286     | 12,514,289           | 16,759,344     | 29,273,633     |
| 2023-2027               | 85,178,754     | 111,498,389    | 196,677,143    | 77,986,667           | 74,342,665     | 152,329,332    |
| 2028-2032               | 107,780,309    | 88,161,225     | 195,941,534    | 96,808,169           | 54,806,022     | 151,614,191    |
| 2033-2037               | 135,379,673    | 59,550,705     | 194,930,378    | 118,327,835          | 32,268,969     | 150,596,804    |
| 2038-2042               | 100,414,452    | 24,155,430     | 124,569,882    | 61,158,043           | 6,785,058      | 67,943,101     |
| 2043-2047               | 53,393,984     | 6,605,093      | 59,999,077     | 4,422,654            | 398,108        | 4,820,762      |
| Total                   | \$ 545,767,507 | \$ 419,221,422 | \$ 964,988,929 | \$ 416,591,578       | \$ 257,689,177 | \$ 674,280,755 |

**Note 6 - Contingent Liabilities**

The Department is subject to various governmental environmental laws and regulations. GASB Statement No. 49, *Accounting and Financial Reporting for Pollution Remediation Obligations*, established accounting and financial reporting standards for pollution (including contamination) remediation obligations, which are obligations to address the current or potential detrimental effects of existing pollution by participating in pollution remediation activities such as site assessments and cleanups. The standard excludes pollution prevention or control obligations with respect to current operations, and future pollution remediation activities that are required upon retirement of an asset, such as landfill closure and postclosure care. The Department determined that there were no estimated pollution remediation obligations to be recorded at June 30, 2017.

The Department is also a defendant in numerous alleged claims, lawsuits, billing disputes, and other stated and pending demands. The Department's and the City's legal department have estimated a reserve, which is included in the accompanying basic financial statements, for the potential outcome of such claims or the amount of potential damages in the event of an unfavorable outcome for each of the above contingencies. The Department's management and the City's legal department believe that any differences in reserved amounts and final settlement, after consideration of claims covered by insurance, resulting from such litigation will not materially impact the Department's financial position or results of operations.

*Binns vs. Detroit* and *Detroit Alliance Against Rain Tax vs. Detroit* are class action lawsuits challenging the Department's drainage charge as a violation of the Michigan constitution's Headlee Amendment. The cases have been consolidated and original jurisdiction lies in the Michigan Court of Appeals. The Department anticipates a ruling in the fourth quarter of fiscal year 2018. The class plaintiffs seek a ruling that the Department's drainage charge is an illegal tax and all customer classes are entitled to a refund under the Headlee Act of all drainage charges paid during the previous year, which amounted to approximately \$130 million (the 10,000+ class members in *Michigan Warehousing vs. Detroit* released their claims and are precluded from relief). If the Court rules in the plaintiffs' favor, the Department would not be able to impose drainage charges in the future unless voters approve a millage. The City of Detroit, Michigan, currently assesses the maximum millage allowed by law; thus, an additional tax could not be imposed. The nonprevailing party will likely appeal.

The City holds various commercial insurance policies to cover other potential loss exposures.



June 30, 2017

## Note 7 - Risk Management

The Department is exposed to various risks of loss related to property loss, torts, errors and omissions, and employee injuries (workers' compensation) as well as medical benefits provided to employees. The Department is self insured for losses such as workers' compensation, legal, disability benefits, and vehicular liabilities. There is also a risk of loss associated with providing health, dental, and life insurance benefits to employees and retirees.

The Department, through the City, provides health and dental insurance benefits to employees and certain retirees through self-insured health plans that are administered by third-party administrators. The Department does not purchase excess or stop-loss insurance for its self-insured health plans.

The Department purchases public official liability insurance, property insurance for certain properties, and general liability insurance for accidents occurring at certain properties. The Department assumes a \$250,000 self-insured retention for any one loss or occurrence under its self-insured public official liability program. The Department purchases excess liability insurance for its general liability for certain properties that provides per occurrence and aggregate protection. The Department is fully self insured for environmental-related liabilities and purchases no excess environmental liability insurance. Settled claims relating to the commercial insurance have not exceeded the amount of insurance coverage in any of the past three fiscal years.

The Department estimates the liability for claims that have been incurred through the end of the fiscal year, including claims that have been reported as well as those that have not yet been reported. Changes in the estimated liability for the past two fiscal years were as follows:

|   | Water Fund          |                   | Sewage Disposal Fund |                     |
|---|---------------------|-------------------|----------------------|---------------------|
|   | 2017                | 2016              | 2017                 | 2016                |
| Estimated liability - Beginning of year                   | \$ 489,624          | \$ 12,844,460     | \$ 1,043,797         | \$ 21,581,140       |
| Estimated claims incurred, including changes in estimates | 4,290,170           | 7,600             | 14,927,576           | 1,007,600           |
| Liability assumed by GLWA                                 | -                   | (12,297,637)      | -                    | (21,309,996)        |
| Claim payments  | (1,115,184)         | (64,799)          | (181,590)            | (234,947)           |
| Estimated liability - End of year                         | <u>\$ 3,664,610</u> | <u>\$ 489,624</u> | <u>\$ 15,789,783</u> | <u>\$ 1,043,797</u> |

## Note 8 - Pension Plans

### Plan Description

The Department participates in the City of Detroit General Retirement System (the "System"). The System is a single-employer plan composed of a defined benefit plan component and a defined contribution annuity plan component. The plan provides retirement, disability, and survivor benefits to plan members and beneficiaries. The plan is administered by its own board of trustees. Plan members include active employees, retirees, and beneficiaries from various departments within the City. Benefit terms have been established by contractual agreements between the City and the employees' collective bargaining units; amendments are subject to the same process.

The System issues publicly available financial reports that include financial statements and the required supplementary information. The reports can be obtained from City of Detroit Retirement Systems, One Detroit Center, 500 Woodward Ave., Suite 3000, Detroit, MI 48226 or obtained from the System's website ([www.rscd.org](http://www.rscd.org)). Detailed information about the pension plan's fiduciary net position is available in the separately issued financial report. The pension plan's fiduciary net position has been determined on the same basis of accounting used by the pension plan. The Plan uses the economic resources measurement focus and the full accrual basis of accounting. Investments are stated at fair value or estimated fair value. Plan member contributions are recognized in the period in which the contributions are due. Employer contributions to the plan are recognized when due pursuant to legal requirements. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan.



June 30, 2017

**Note 8 - Pension Plans (Continued)**

The City filed for bankruptcy in June 2013 and subsequently exited bankruptcy on December 10, 2014. This resulted in the adoption of the Eighth Amended Plan for Adjustment of Debts of the City of Detroit (the "POA"). Under the provisions of the POA, effective July 1, 2014, the Combined Plan for General Employees Retirement System of the City of Detroit was introduced.

As a result of negotiations between the City and the public employee unions, the existing plan benefit formulas were frozen and no employees were allowed to earn further benefits under the existing plans after June 30, 2014. The emergency manager issued Order #30 (General Employees Retirement System of the City of Detroit) on June 30, 2014, which put these changes into effect. This plan in existence as of June 30, 2014 is known as the "legacy plan" or "Component II".

As of July 1, 2014, all eligible employees began participating in the new hybrid pension plan, or Component I. Eligible city employees will receive the benefits they have earned under the legacy Component II plan for services performed through June 30, 2014, plus an additional benefit under the new hybrid plan formula for services after June 30, 2014.

With respect to Component II benefit adjustments resulting from the POA, the pension settlement (for which benefit levels were and are contingent on other factors, including receipt of outside contributions) provided: for a loss of cost-of-living adjustments, or "escalators" (COLAs), paid after July 1, 2014; for a 4.5 percent reduction to the remaining accrued pension benefit after the COLA loss; and for plan members who participated in the Annuity Savings Fund (ASF) plan between 2003 and 2013, subject to certain caps, recoupment of certain amounts of interest deemed by the City to be in "excess" of that which should have been credited to the individual ASF accounts, referred to as "ASF Recoupment". ASF Recoupment, like other provisions of the pension settlement, was not optional. Most members will pay their ASF Recoupment by a monthly deduction from their future pension benefits for a set term of months, including interest calculated at 6.75 percent. All members were offered a lump-sum cash option, which was limited in the aggregate to \$30 million in member recoupment. The POA also included the possibility of restoration of certain benefit reductions, based on a program for the most financially vulnerable pensioners and beneficiaries through the State of Michigan Treasury Department as well as a new feature of Component II allowing restoration of benefits depending on the plan funding level over time.

Nonemployer contributing entity within Component II - On September 9, 2014, a memorandum of understanding (MOU) was entered into by the emergency manager and mayor of the City of Detroit, Michigan, county executive of each of the charter counties of Wayne and Macomb, the County of Oakland, Michigan, and the governor of the State of Michigan. The purpose of the MOU was to establish a framework for the creation of a regional authority (known as Great Lakes Water Authority or "GLWA") pursuant to Act 233 of 1955 to operate, control, and improve the regional assets of the water supply system and the sewage disposal system owned by the City.

Pursuant to the MOU, the City of Detroit, Michigan and GLWA entered into two lease agreements: the Regional Water Supply System Lease dated June 12, 2015 and the Regional Sewage Supply System Lease dated June 12, 2015. Under the provisions of the lease agreements, GLWA leases the regional assets of the City for a period of at least 40 years.

Pursuant to the lease agreements, on December 1, 2015, a tri-party agreement between the City of Detroit, Michigan, General Retirement System of the City of Detroit (GRS), and GLWA was signed. Per the POA and Section 4.3 of the lease agreements, GLWA is required to pay a portion of the pension obligation that will be allocable to the City of Detroit Water and Sewerage Department. The purpose of the pension reporting agreement is to set forth in determining the funding status for the DWSD pension pool, and for GRS to agree to provide GLWA with certain actuarial and other reports to enable GLWA to properly manage and pay its portion of the pension obligation that is allocable to the DWSD.



June 30, 2017

**Note 8 - Pension Plans (Continued)**

Effective January 1, 2016, GLWA was established. Accordingly, the prior DWSD division was split into two: one representing the ongoing DWSD department, now referenced as DWSD Retail (DWSD-R), and another to represent the Great Lakes Water Authority. In accordance with the pension reporting agreement, the net position and liabilities of the DWSD were allocated to DWSD-R and GLWA in accordance with written directions received from DWSD-R and GLWA. Per written directions, GLWA is to be allocated 70.3 percent of the net position and liabilities of the DWSD. Because GLWA has no employees or retirees in the Combined Plan, GLWA is considered a nonemployer contributing entity in accordance with GASB Statement No. 67. As this arrangement also meets the definition of a special funding situation per GASB Statement No. 68, GLWA's allocated pension expense of \$6,307,901 is recognized by the Department as a revenue and expense.

**Benefits Provided**

*Component II* - Component II is the legacy plan, the original defined benefit plan, which includes a defined benefit component and a defined contribution component. Component II generally applies to benefits accrued by members prior to July 1, 2014. The plan provides retirement, disability, and survivor benefits to plan members and beneficiaries. Except as specifically provided in Combined Plan, benefits provided under Component II are frozen effective June 30, 2014. Component II also includes the Income Stabilization Fund. The fund, a part of Component II and established as a provision of the POA, was established for the sole purpose of paying the Income Stabilization Benefits and Income Stabilization Benefits Plus to eligible pensioners.

The Income Stabilization Fund is outlined in Section G-3 of the POA. The annual supplemental pension income stabilization benefit is equal to the lesser of either (i) the amount needed to restore an eligible retiree's reduced annual pension benefit to 100 percent of the amount of the annual pension benefit that the eligible retiree was receiving from the System in 2013; or (ii) the amount needed to bring the total annual 2013 household income of the eligible retiree up to 130 percent of the Federal Poverty Level for 2013. The Income Stabilization Fund did not have an impact on total pension liability for the systems or the City as of the measurement date of June 30, 2016 because the assets held by the Income Stabilization Fund are not considered to be available to fund the normal retirement benefit provisions under the pension plan but instead are restricted to pay Income Stabilization Benefits and Income Stabilization Benefits Plus. No liability currently exists for these benefits.

Postbankruptcy GRS Component II plan members upon retirement will receive an annuity which shall be the actuarial equivalent of the member's accumulated contributions in the 1973 Defined Contribution Annuity Savings Fund at the time of retirement. In addition, each member will receive a basic service and a membership service pension. The Basic Service Pension will consist of \$12.00 per annum multiplied by the number of years and fractions of years of credited service, not to exceed 10 years. The Membership Service Pension will be calculated as follows:

- For members who retire on or before June 30, 1992, a membership service pension of 1.5 percent of average final compensation for the first 10 years of service and 1.63 percent for service in excess of 10 years
- For members who retire on or after July 1, 1992 but prior to July 1, 1998, a membership service pension of 1.5 percent of average final compensation for each year of service for the first 10 years, plus 1.7 percent of average final compensation for each year of service in excess of 10 years up to 20 years of service, plus 1.9 percent of average final compensation for each year of service in excess of 20 years. In no event shall benefits paid by the System exceed 90 percent of average final compensation.



**June 30, 2017****Note 8 - Pension Plans (Continued)**

- For members who retire on or after July 1, 1998, a membership service pension for service rendered prior to July 1, 2012 of 1.6 percent of average final compensation for each year of service for the first 10 years, plus 1.8 percent of average final compensation for each year of service in excess of 10 years, up to 20 years of service, plus 2 percent of average final compensation for each year of service in excess of 20 years up to 25 years, plus 2.2 percent of average final compensation for each year of service in excess of 25 years; plus, for service rendered after July 1 2012 and prior to July 1, 2014, 1.5 percent of average final compensation for each year of service; plus \$12 for each year of city service not to exceed \$120. Notwithstanding the foregoing, for members of the Michigan Council 25 of the American Federation of State, County and Municipal Employees, AFL-CIO Local 2920 and the Detroit Senior Water Systems Chemists Association bargaining units, the effective date of the 1.5 percent multiplier was April 1, 2013 for all years of service rendered after that date. In no case shall benefits paid by the System exceed 90 percent of average final compensation.

In the event the eligible retiree's estimated adjusted annual household income in any calendar year after the first year that the eligible retiree receives a benefit from the Income Stabilization Fund is less than 105 percent of the Federal Poverty Level in that year, the eligible retiree will receive an additional Income Stabilization Benefit Plus benefit commencing as of the following July 1.

*Component I* - Component I is considered a "hybrid" plan because it includes a defined benefit component and a defined contribution component. Component I of the plan document applies to benefits accrued by members of the GRS on and after July 1, 2014. The Component I plan provides retirement, disability, and survivor benefits to plan members and beneficiaries.

***Contributions***

Article 9, Section 24 of the State of Michigan constitution requires that financial benefits arising on account of employee service rendered in each year be funded during that year. Accordingly, in the past, the System retained an independent actuary to determine the annual contribution. Until 2024, contributions are based on specific provisions of the Plan of Adjustment. After 2024, contributions will be actuarially determined based on a 30-year level principal closed amortization.

**Employer Contributions*****Component II***

The Department made contributions of \$12,741,300 to the System for the fiscal year ended June 30, 2017.

***Component I***

Per Section 9.3 of the Combined Plan, commencing on July 1, 2015 and ending on June 30, 2023, the Department is required to contribute 5 percent of compensation of active members. During the fiscal year ended June 30, 2017, the Department contributed \$1,012,219 to the Component I plan.

***Employee Contributions***

Contribution requirements of plan members are established and may be amended by the board of trustees in accordance with the City Charter, union contracts, and plan provisions. For the year ended June 30, 2017, there were no employee contributions into Component II, as the plan was frozen as of June 30, 2014. Effectively, employee contributions were allowed only until August 1, 2014. Contributions into Component I began with the members' first payroll date occurring in August 2014. With respect to GRS Component I, the Department's employees who are members of GRS are now required to make mandatory contributions of 4 percent of pay toward their defined benefit. Additionally, employees can make voluntary contributions of 3, 5, or 7 percent of annual pay. During the fiscal year ended June 30, 2017, the Department's employees contributed \$1,424,205 in mandatory and voluntary contributions.

June 30, 2017

**Note 8 - Pension Plans (Continued)**

***Net Pension Liability***

As permitted by GASB Statement No. 68, the Department has chosen to use June 30, 2016 as its measurement date for the net pension liability. The net pension liability was calculated using the total pension liability and the Systems' fiduciary net position as of June 30, 2016. The June 30, 2016 total pension liability was determined by an actuarial valuation performed as of June 30, 2015, which used updated procedures to roll forward the estimated liability to June 30, 2016. At June 30, 2016, the Department reported a liability for its net pension liability as follows:

|  | Component II                 | Component I   |
|--|------------------------------|---------------|
| Measurement date used for the Department NPL       | June 30, 2016                | June 30, 2016 |
| Based on a comprehensive actuarial valuation as of | June 30, 2015                | June 30, 2015 |
|  | <b>Net Pension Liability</b> |               |
| Component II                                       | \$ 81,992,088                |               |
| Component I  | 4,182,066                    |               |
| Total  | \$ 86,174,154                |               |

***Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions***

For the year ended June 30, 2017, the Department recognized a pension expense of \$8,972,832 for Component II and \$5,087,291 for Component I.

At June 30, 2017, the Department reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

|  | Component II                   |                               | Component I                    |                               |
|--|--------------------------------|-------------------------------|--------------------------------|-------------------------------|
|  | Deferred Outflows of Resources | Deferred Inflows of Resources | Deferred Outflows of Resources | Deferred Inflows of Resources |
| Difference between expected and actual experience                                | \$ -                           | \$ -                          | \$ -                           | \$ (1,369,116)                |
| Changes in assumptions   | -                              | -                             | 452,361                        | (270,145)                     |
| Net difference between projected and actual earnings on pension plan investments | 5,151,008                      | -                             | 529,639                        | -                             |
| Employer contributions to the plan subsequent to the measurement date            | 12,741,300                     | -                             | 1,012,219                      | -                             |
| Total  | \$ 17,892,308                  | \$ -                          | \$ 1,994,219                   | \$ (1,639,261)                |



June 30, 2017

### Note 8 - Pension Plans (Continued)

From the above table, the Plan reported \$12,741,300 and \$1,012,219 for Components II and I, respectively, as deferred outflows of resources resulting from employer contributions subsequent to the measurement date, which will be recognized as a reduction of the net pension liability in the year ended June 30, 2018.

The deferred outflows of resources and deferred inflows of resources related to the change in actuarial assumptions, the net differences between projected and actual earnings on pension plan investments, and the differences between expected and actual experiences will be amortized and recognized as an addition to or a reduction of pension expense as follows:

| Years Ending<br>June 30 | Component II        | Component I         |
|-------------------------|---------------------|---------------------|
| 2018                    | \$ (439,838)        | \$ (41,125)         |
| 2019                    | (439,838)           | (41,125)            |
| 2020                    | 3,429,280           | (41,125)            |
| 2021                    | 2,601,404           | (70,614)            |
| 2022                    | -                   | (180,907)           |
| Thereafter              | -                   | (282,365)           |
| Total                   | <u>\$ 5,151,008</u> | <u>\$ (657,261)</u> |

#### Actuarial Assumptions

The total pension liability in each actuarial valuation was determined using the following actuarial assumptions applied to all periods included in the measurement:

|  | Component II | Component I |
|--|--------------|-------------|
| Inflation  | N/A          | N/A         |
| Salary increases                                       | N/A          | 2.0 - 3.0%  |
| Investment rate of return (net of investment expenses) | 7.23%        | 7.23%       |

Based on an experience study from 2008-2013 issued in February 2015, the mortality table assumption was based on the RP-2014 Blue Collar Annuitant Table for males and females. The tables are projected to be fully generational, based on the two-dimensional sex distinct mortality scale MP-2014.

The actuarial assumptions other than mortality and the investment rate of return, used in the June 30, 2015 valuation to calculate the total pension liability as of June 30, 2016, were based on the results of an actuarial experience study for the period from 2002-2007.

June 30, 2017

**Note 8 - Pension Plans (Continued)**

**Discount Rate**

The discount rate used to measure the total pension liability as of June 30, 2016 was 7.23 percent for both Components I and II; however, the single discount rate used at the beginning of the year was 7.61 percent for both plans. For the Component II plan, the projection of cash flows used to determine the discount rates assumed that employee contributions will cease as of June 30, 2014 and that city contributions, including contributions sourced from the proceeds of the sale of artwork from the State of Michigan and the Foundation for Detroit's Future, will be made at rates equal to those set by the final Plan of Adjustment through June 30, 2023 and a 30-year closed level dollar amortization thereafter. For the Component I plan, the projection of cash flows used to determine the discount rates assumed that employee contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the employee rate. Based on those assumptions, the pension plans' fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

**Investment Rate of Return**

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of geometric real rates of return as of June 30, 2016 for each major asset class including pension plan target asset allocation, as disclosed in the investment footnote, are summarized in the following table:

**Component I and Component II**

| Asset Class                                     | Target Allocation | Long-term Expected Real Rate of Return |
|---|-------------------|--|
| Global equity                                   | 43.00 %           | 6.22 %                                 |
| Global fixed income                             | 12.00             | 2.95                                   |
| Real estate                                     | 10.00             | 3.92                                   |
| Private equity                                  | 8.00              | 7.35                                   |
| Hedge funds                                     | 5.00              | 4.41                                   |
| Global asset allocation/risk parity/real assets | 21.00             | 5.02                                   |
| Cash  | 1.00              | 0.98                                   |

**Sensitivity of the Net Pension Liability to Changes in the Discount Rate**

The following presents the net pension liability of the Department, calculated using the discount rate of 7.23 percent, as well as what the Department's net pension liability would be if it were calculated using a discount rate that is 1 percentage point lower or 1 percentage point higher than the current rate:

|                                       | 1 Percent Decrease (6.23%) | Current Discount Rate (7.23%) | 1 Percent Increase (8.23%) |
|---------------------------------------|----------------------------|-------------------------------|----------------------------|
| Net pension liability of Component II | \$ 103,922,452             | \$ 81,992,088                 | \$ 63,343,141              |
| Net pension liability of Component I  | 6,258,664                  | 4,182,066                     | 2,483,481                  |
| Total                                 | <u>\$ 110,181,116</u>      | <u>\$ 86,174,154</u>          | <u>\$ 65,826,622</u>       |



June 30, 2017

## Note 9 - Other Postemployment Benefits

In prior years, the City offered retiree health care, life insurance, and supplemental death benefits. Under the City's Plan of Adjustment approved in the Bankruptcy Case, the City restructured retiree health benefits through the creation of two voluntary employee beneficiary associations (or VEBAs). The Employee Health and Life Insurance Benefit Plan was significantly reduced on March 1, 2014 and terminated on December 31, 2014. The supplemental death benefits plan was also closed as of December 10, 2014; benefits to be paid to individuals retiring prior to that date are limited to the assets allocated to the closed plan. There are no further contribution requirements for the City or for plan members.

The City continues to provide certain death benefits to its employees providing services after December 10, 2014. The remainder of this note relates solely to those benefits.

### Plan Description

The Supplemental Death Benefit Plan (the "Supplemental Plan") is a prefunded single-employer defined benefit plan administered by the employee benefit board of trustees and is accounted for in the City's Employee Death Benefits Fund. The Supplemental Plan does not issue a separate standalone financial statement. The money is held in the City of Detroit Employee Benefit Trust and the City uses the trust fund to account for the Supplemental Plan.

### Funding Policy

The City is under no legal obligation to prefund the plan benefits. Plan members have no contribution requirements. While the City has made contributions in prior years, no contributions were made during the year ended June 30, 2017.

### Funding Progress

For the year ended June 30, 2017, the City has estimated the cost of providing these other postemployment benefits through an actuarial valuation as of June 30, 2016. The valuation computes an annual required contribution, which represents a level of funding that, if paid on an ongoing basis, is projected to cover normal costs each year and amortize any unfunded actuarial liabilities over a period not to exceed 30 years. This valuation's computed contribution and actual funding are summarized as follows:

|   |    |          |
|---|----|----------|
| Annual required contribution (recommended)          | \$ | 10,104   |
| Interest on the prior year's net OPEB obligation    |    | 46,091   |
| Less adjustment to the annual required contribution |    | (21,541) |
| Annual OPEB cost - Increase in net OPEB obligation  |    | 34,654   |
| OPEB obligation - Beginning of year                 |    | 646,217  |
| OPEB obligation - End of year                       | \$ | 680,871  |

Employer contributions and annual OPEB cost data for the current and two preceding years were as follows:

| Fiscal Year Ended | Annual OPEB Costs | Actual Contributions | Percentage OPEB Costs Contributed | Net OPEB Obligation |
|-------------------|-------------------|----------------------|-----------------------------------|---------------------|
| June 30, 2017     | \$ 34,653         | \$ -                 | - %                               | \$ 680,871          |
| June 30, 2016     | 69,301            | 8,533                | 12.31                             | 646,218             |
| June 30, 2015     | 72,546            | -                    | -                                 | 585,449             |



**June 30, 2017****Note 9 - Other Postemployment Benefits (Continued)*****Funded Status and Funding Progress***

As of June 30, 2016, the most recent actuarial valuation date for the Supplemental Plan, the actuarial accrued liability for benefits related to all city employees was \$3,292,916 and the actuarial value of assets was \$4,002,000, resulting in an unfunded actuarial accrued liability (UAAL) of \$(709,477). The covered payroll (annual payroll of all active city employees covered by the plan) was \$449,330,941 and the ratio of the UAAL to the covered payroll was (0.2) percent.

The preceding figures do not include the closed plan. The closed plan includes assets of approximately \$21.4 million, which equals the actuarial accrued liability of the plan as of June 30, 2017.

***Actuarial Methods and Assumptions***

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the employer are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The schedule of funding progress, presented above, presents multi-year trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and the plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets consistent with the long-term perspective of the calculations.

In the June 30, 2016 actuarial valuation, the individual entry age actuarial cost method was used. The actuarial assumptions included a 6.7 percent investment rate of return (net of administrative expenses), which is a blended rate of the expected long-term investment returns on plan assets and on the employer's own investments calculated based on the funded level of the plan at the valuation date and an annual healthcare cost trend rate of 12 percent initially reduced by decrements to an ultimate rate of 5 percent after 10 years. Both rates included a 4.5 percent inflation assumption. The actuarial value of assets was determined using techniques that spread the effects of short-term volatility in the market value of investments over a five-year period. The UAAL is being amortized as a level percentage of projected payroll on an open basis. The remaining amortization period at June 30, 2016 was 30 years. The mortality tables used by the Supplemental Plan to evaluate the death benefits to be paid for general retirees were 100 percent of the RP 2014 Blue Collar Annuitant table set forward one year.

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## Required Supplemental Information

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# City of Detroit Water and Sewerage Department

## Required Supplemental Information Schedule of Changes in the Net Pension Liability and Related Ratios - Component II

### Last Three Fiscal Years (Based on Measurement Date)

|   | 2016*                 | 2015                  | 2014                    |
|---|-----------------------|-----------------------|-------------------------|
| <b>Total Pension Liability</b>  |                       |                       |                         |
| Service cost  | \$ -                  | \$ -                  | \$ 9,746,003            |
| Interest  | 17,060,232            | 73,105,847            | 66,690,581              |
| Changes in benefit terms  | -                     | (216,739,841)         | (27,617,959)            |
| Differences between expected and actual experience                                    | (2,139,381)           | (607,587)             | -                       |
| Changes in assumptions  | 7,447,135             | (28,150,723)          | (74,737,651)            |
| Benefit payments, including refunds   | (29,420,988)          | (77,231,357)          | (98,853,724)            |
| <b>Net Change in Total Pension Liability</b>  | (7,053,002)           | (249,623,661)         | (124,772,750)           |
| <b>Total Pension Liability - Beginning of year</b>                                    | 238,892,250           | 1,053,974,670         | 1,178,747,420           |
| <b>Total Pension Liability - End of year</b>  | <b>\$ 231,839,248</b> | <b>\$ 804,351,009</b> | <b>\$ 1,053,974,670</b> |
| <b>Plan Fiduciary Net Position</b>  |                       |                       |                         |
| Contributions - Employer  | \$ 12,741,300         | \$ 42,888,889         | \$ 21,491,022           |
| Contributions - Member  | -                     | 186,274               | 3,335,706               |
| Net investment (loss) income  | (917,059)             | 24,580,775            | 102,177,233             |
| Administrative expenses   | -                     | (30,290)              | (3,416,015)             |
| Benefit payments, including refunds   | (29,420,988)          | (77,231,357)          | (98,853,724)            |
| Other   | 469,357               | 39,485,858            | -                       |
| <b>Net Change in Plan Fiduciary Net Position</b>                                      | (17,127,390)          | 29,880,149            | 24,734,222              |
| <b>Plan Fiduciary Net Position - Beginning of year</b>                                | 166,974,550           | 532,323,722           | 507,589,500             |
| <b>Plan Fiduciary Net Position - End of year</b>                                      | <b>\$ 149,847,160</b> | <b>\$ 562,203,871</b> | <b>\$ 532,323,722</b>   |
| <b>Department's Net Pension Liability - Ending</b>                                    | <b>\$ 81,992,088</b>  | <b>\$ 242,147,138</b> | <b>\$ 521,650,948</b>   |
| <b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b>         | 64.63 %               | 69.90 %               | 50.51 %                 |
| <b>Covered Employee Payroll</b>   | \$ 57,607,917         | \$ 60,782,192         | \$ 64,835,429           |
| <b>Department's Net Pension Liability as a Percentage of Covered Employee Payroll</b> | 142.33 %              | 398.39 %              | 804.58 %                |

\* As described in Note 8, the Great Lakes Water Authority (GLWA) was established on January 1, 2016. On this date, GLWA assumed a portion of the net position and liabilities of the Department. 2016 has been adjusted to reflect only the portion allocated to the Department.

GASB Statement No. 67 was implemented for FYE 2014 and does not require retroactive implementation. Data will be added as information is available until 10 years of such information is available.

# City of Detroit Water and Sewerage Department

## Required Supplemental Information Schedule of Changes in the Net Pension Liability and Related Ratios - Component I

### Last Two Fiscal Years (Based on Measurement Date)

|   | 2016                 | 2015                |
|---|----------------------|---------------------|
| <b>Total Pension Liability</b>  |                      |                     |
| Service cost  | \$ 5,556,742         | \$ 5,853,312        |
| Interest  | 704,400              | 210,719             |
| Differences between expected and actual experience                                    | (1,577,654)          | -                   |
| Changes in assumptions  | 521,263              | (352,686)           |
| Benefit payments, including refunds   | (1,827,192)          | -                   |
| Voluntary member contributions  | 1,085,989            | 1,662,483           |
| <b>Net Change in Total Pension Liability</b>  | 4,463,548            | 7,373,828           |
| <b>Total Pension Liability - Beginning of year</b>                                    | 7,373,828            | -                   |
| <b>Total Pension Liability - End of year</b>  | <b>\$ 11,837,376</b> | <b>\$ 7,373,828</b> |
| <b>Plan Fiduciary Net Position</b>  |                      |                     |
| Contributions - Employer  | \$ 1,884,087         | \$ 2,596,022        |
| Contributions - Member  | 1,529,722            | 2,103,576           |
| Net investment (loss) income  | (33,400)             | 6,011               |
| Administrative expenses   | (912,491)            | (436,927)           |
| Benefit payments, including refunds   | (1,827,192)          | -                   |
| Voluntary member contributions  | 1,085,989            | 1,662,483           |
| Other   | (2,570)              | -                   |
| <b>Net Change in Plan Fiduciary Net Position</b>                                      | 1,724,145            | 5,931,165           |
| <b>Plan Fiduciary Net Position - Beginning of year</b>                                | 5,931,165            | -                   |
| <b>Plan Fiduciary Net Position - End of year</b>                                      | <b>\$ 7,655,310</b>  | <b>\$ 5,931,165</b> |
| <b>Department's Net Pension Liability - Ending</b>                                    | <b>\$ 4,182,066</b>  | <b>\$ 1,442,663</b> |
| <b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b>         | 64.67 %              | 80.44 %             |
| <b>Covered Employee Payroll</b>   | \$ 57,607,917        | \$ 60,782,192       |
| <b>Department's Net Pension Liability as a Percentage of Covered Employee Payroll</b> | 7.26 %               | 2.37 %              |

GASB Statement No. 67 was implemented for FYE 2014 and does not require retroactive implementation. Data will be added as information is available until 10 years of such information is available.



# City of Detroit Water and Sewerage Department

## Required Supplemental Information Schedule of Pension Contributions - Component II

|  | Last Ten Fiscal Years<br>Years Ended June 30 |               |               |                |                |               |               |                |                |                |
|--|--|---------------|---------------|----------------|----------------|---------------|---------------|----------------|----------------|----------------|
|  | 2017*  | 2016*         | 2015*         | 2014           | 2013           | 2012          | 2011          | 2010           | 2009           | 2008           |
| Actuarially required contribution                            | \$ 12,741,300                                | \$ 42,888,889 | \$ 21,491,022 | \$ 24,868,234  | \$ 24,865,090  | \$ 13,026,588 | \$ 21,791,527 | \$ 9,386,138   | \$ 8,434,151   | \$ 12,396,854  |
| Contributions in relation to the                             |  |               |               |                |                |               |               |                |                |                |
| actuarially required contribution                            | 12,741,300                                   | 42,888,889    | 21,491,022    | 27,301,090     | 26,450,595     | 10,861,181    | 19,715,512    | 11,400,588     | 11,587,039     | 13,425,623     |
| Contribution (Excess)<br>Deficiency                          | \$ -   | \$ -          | \$ -          | \$ (2,432,856) | \$ (1,585,505) | \$ 2,165,407  | \$ 2,076,015  | \$ (2,014,450) | \$ (3,152,888) | \$ (1,028,769) |
| Department's Covered<br>Employee Payroll                     | \$ 41,216,957                                | \$ 57,607,917 | \$ 60,782,192 | \$ 64,835,429  | \$ 64,836,192  | \$ 78,425,725 | \$ 80,880,585 | \$ 88,124,257  | \$ 88,882,438  | \$ 91,857,108  |
| Contributions as a Percentage<br>of Covered Employee Payroll | 30.91 %                                      | 74.45 %       | 35.36 %       | 42.11 %        | 40.80 %        | 13.85 %       | 24.38 %       | 12.94 %        | 13.04 %        | 14.62 %        |

\* Contributions beginning with fiscal year 2015 were determined by the provisions of the Plan of Adjustment and were not actuarially determined.

## City of Detroit Water and Sewerage Department

### Required Supplemental Information Schedule of Pension Contributions - Component I

|  | Last Three Fiscal Years<br>Years Ended June 30 |                      |                      |
|--|--|----------------------|----------------------|
|  | 2017   | 2016                 | 2015                 |
| Contractually determined contribution                                  | \$ 1,012,219                                   | \$ 1,884,087         | \$ 2,596,022         |
| Contributions in relation to the contractually determined contribution | 1,012,219                                      | 1,884,087            | 2,596,022            |
| <b>Contribution Deficiency</b>   | <b>\$ -</b>                                    | <b>\$ -</b>          | <b>\$ -</b>          |
| <b>Covered Employee Payroll</b>  | <b>\$ 41,216,957</b>                           | <b>\$ 57,607,917</b> | <b>\$ 60,782,192</b> |
| <b>Contributions as a Percentage of Covered Employee Payroll</b>       | <b>2.46 %</b>                                  | <b>3.27 %</b>        | <b>4.27 %</b>        |

Contributions are made in accordance with the Plan of Adjustment, which is 5 percent of compensation of active members.

**June 30, 2017**

**Pension Information**

***Benefit Changes***

**Component II**

In 2014, the pension plan was frozen. No new employees are allowed to participate in the plan. All benefits for actives were frozen as of June 30, 2014 based on service and average final compensation accrued as of that date.

In 2015, benefits were reduced by 4.5 percent and the cost-of-living adjustments were eliminated.

***Changes in Assumptions***

**Component II**

In 2014, amounts reported as changes of assumptions resulted from adjustment of the discount rate from 5.88 percent to 7.2 percent, updating the mortality tables from RP-2000 Combined Table to RP-2014 Blue Collar Mortality Table, and adjustments for longevity and unused sick leave were eliminated.

**Component II and I**

In 2015, amounts reported as changes of assumptions resulted from adjustment of the discount rate from 7.2 percent to 7.61 percent.

In 2016, amounts reported as changes of assumptions resulted from adjustment of the discount rate from 7.61 percent to 7.23 percent.





## **Financial Services Audit Committee Communication**

### **INFORMATION**

Item 10B - City of Detroit Water and Sewerage Department Monthly Financial Report for January 2018



# **JANUARY 2018 REVIEW**

## **FINANCE COMMITTEE**

∞ March 7, 2018

# Summary Financial Metrics



|   |        | 7/31/2017 | 8/31/2017 | 9/30/2017 | 10/31/2017 | 11/30/2017 | 12/31/2017 | 1/31/2018 | 2/28/2018 | 3/31/2018 | 4/30/2018 | 5/31/2018 | 6/30/2018 |
|---|--------|-----------|-----------|-----------|------------|------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Volumes<br>(Mcf)                          | Budget | 295,700   | 303,100   | 248,900   | 236,100    | 218,400    | 238,500    | 224,700   | 224,700   | 235,700   | 217,700   | 256,700   | 284,800   |
|   | Actual | 274,267   | 269,802   | 259,341   | 247,700    | 208,783    | 213,026    |           |           |           |           |           |           |
|   | Status |           |           |           |            |            |            |           |           |           |           |           |           |
| DAYS CASH<br>(days)                       | Budget | 100.00    | 100.00    | 100.00    | 100.00     | 100.00     | 100.00     | 100.00    | 100.00    | 100.00    | 100.00    | 100.00    | 100.00    |
|   | Actual | 74.57     | 82.17     | 91.59     | 92.76      | 99.46      | 90.59      | 100.25    |           |           |           |           |           |
|   | Status |           |           |           |            |            |            |           |           |           |           |           |           |
| DAYS PAYABLE OUTSTANDING<br>(days)        | Budget | 45.00     | 45.00     | 45.00     | 45.00      | 45.00      | 45.00      | 45.00     | 45.00     | 45.00     | 45.00     | 45.00     | 45.00     |
|   | Actual | 82.32     | 75.02     | 39.52     | 22.85      | 41.44      | 58.20      | 51.23     |           |           |           |           |           |
|   | Status |           |           |           |            |            |            |           |           |           |           |           |           |
| WATER 30-60 DAY COLLECTION RATE<br>(%)    | Budget | 70.00%    | 70.00%    | 70.00%    | 70.00%     | 70.00%     | 70.00%     | 70.00%    | 70.00%    | 70.00%    | 70.00%    | 70.00%    | 70.00%    |
|   | Actual | 73.00%    | 80.30%    | 55.40%    | 75.40%     | 71.84%     | 71.02%     |           |           |           |           |           |           |
|   | Status |           |           |           |            |            |            |           |           |           |           |           |           |
| SEWER 30-60 DAY COLLECTION RATE<br>(%)    | Budget | 68.00%    | 68.00%    | 68.00%    | 68.00%     | 68.00%     | 68.00%     | 68.00%    | 68.00%    | 68.00%    | 68.00%    | 68.00%    | 68.00%    |
|   | Actual | 62.80%    | 57.80%    | 60.50%    | 55.80%     | 51.74%     | 57.80%     |           |           |           |           |           |           |
|   | Status |           |           |           |            |            |            |           |           |           |           |           |           |
| WATER 330-360 DAYS COLLECTION RATE<br>(%) | Budget | 90.00%    | 90.00%    | 90.00%    | 90.00%     | 90.00%     | 90.00%     | 90.00%    | 90.00%    | 90.00%    | 90.00%    | 90.00%    | 90.00%    |
|   | Actual | 92.10%    | 92.10%    | 94.70%    | 96.60%     | 94.73%     | 93.90%     |           |           |           |           |           |           |
|   | Status |           |           |           |            |            |            |           |           |           |           |           |           |
| SEWER 330-360 DAY COLLECTION RATE<br>(%)  | Budget | 90.00%    | 90.00%    | 90.00%    | 90.00%     | 90.00%     | 90.00%     | 90.00%    | 90.00%    | 90.00%    | 90.00%    | 90.00%    | 90.00%    |
|   | Actual | 86.80%    | 86.10%    | 95.30%    | 95.00%     | 93.65%     | 95.22%     |           |           |           |           |           |           |
|   | Status |           |           |           |            |            |            |           |           |           |           |           |           |
| HEADCOUNT<br>(Full Time Employees)        | Budget | 579       | 579       | 579       | 579        | 579        | 579        | 579       | 579       | 579       | 579       | 579       | 579       |
|   | Actual | 488       | 488       | 486       | 506        | 510        | 508        | 522       |           |           |           |           |           |
|   | Status |           |           |           |            |            |            |           |           |           |           |           |           |
| O&M COSTS<br>(\$)                         | Budget | 9,827,573 | 9,827,573 | 9,827,573 | 9,827,573  | 9,827,573  | 9,827,573  | 9,827,573 | 9,827,573 | 9,827,573 | 9,827,573 | 9,827,573 | 9,827,573 |
|   | Actual | 6,723,202 | 9,986,668 | 3,915,421 | 6,757,316  | 10,588,422 | 8,592,414  | 8,668,719 |           |           |           |           |           |
|   | Status |           |           |           |            |            |            |           |           |           |           |           |           |

# Retail Water Customers



| Month                | Volume (Mcf)     |                  |                 | Revenue (\$)         |                      |                       |
|----------------------|------------------|------------------|-----------------|----------------------|----------------------|-----------------------|
|                      | Budget           | Actual           | Variance        | Budget               | Actual               | Variance              |
| July                 | 295,700          | 274,267          | (21,433)        | \$ 9,332,300         | \$ 8,813,936         | \$ (518,364)          |
| August               | 303,100          | 269,802          | (33,298)        | 9,517,000            | 8,631,595            | (885,405)             |
| September            | 248,900          | 259,341          | 10,441          | 8,393,900            | 8,463,041            | 69,141                |
| October              | 236,100          | 247,700          | 11,600          | 7,947,500            | 8,187,943            | 240,443               |
| November             | 218,400          | 208,783          | (9,617)         | 7,585,100            | 7,276,521            | (308,579)             |
| December             | 238,500          | 213,026          | (25,474)        | 8,008,200            | 7,333,094            | (675,106)             |
| January              | 224,700          | -                | -               | 7,673,100            | -                    | -                     |
| February             | 224,700          | -                | -               | 7,813,100            | -                    | -                     |
| March                | 235,700          | -                | -               | 7,944,800            | -                    | -                     |
| April                | 217,700          | -                | -               | 7,529,200            | -                    | -                     |
| May                  | 256,700          | -                | -               | 8,946,300            | -                    | -                     |
| June                 | 284,800          | -                | -               | 9,089,900            | -                    | -                     |
| <b>Totals</b>        | <b>2,985,000</b> | <b>1,472,919</b> | <b>(67,781)</b> | <b>\$ 99,780,400</b> | <b>\$ 48,706,129</b> | <b>\$ (2,077,871)</b> |
| <i>Subtotals YTD</i> | <i>1,540,700</i> | <i>1,472,919</i> | <i>(67,781)</i> | <i>\$ 50,784,000</i> | <i>\$ 48,706,129</i> | <i>\$ (2,077,871)</i> |

# Retail Sewer Customers



| Month                | Volume (Mcf)     |                  |                 | Revenue (\$)          |                       |                   |  |
|----------------------|------------------|------------------|-----------------|-----------------------|-----------------------|-------------------|--|
|                      | Budget           | Actual           | Variance        | Budget                | Actual                | Variance          |  |
| July                 | 260,000          | 244,512          | (15,488)        | \$ 24,615,100         | \$ 24,624,820         | \$ 9,720          |  |
| August               | 260,600          | 239,911          | (20,689)        | 24,754,400            | 24,348,011            | (406,389)         |  |
| September            | 222,800          | 228,122          | 5,322           | 22,752,800            | 23,517,204            | 764,404           |  |
| October              | 205,500          | 224,159          | 18,659          | 22,717,800            | 23,573,505            | 855,705           |  |
| November             | 189,900          | 188,312          | (1,588)         | 21,987,300            | 22,084,385            | 97,085            |  |
| December             | 204,400          | 190,811          | (13,589)        | 22,774,800            | 21,937,291            | (837,509)         |  |
| January              | 195,300          | -                | -               | 22,296,100            | -                     | -                 |  |
| February             | 198,300          | -                | -               | 23,060,600            | -                     | -                 |  |
| March                | 203,000          | -                | -               | 23,026,900            | -                     | -                 |  |
| April                | 189,300          | -                | -               | 22,215,900            | -                     | -                 |  |
| May                  | 219,400          | -                | -               | 23,798,700            | -                     | -                 |  |
| June                 | 251,500          | -                | -               | 24,635,500            | -                     | -                 |  |
| <b>Totals</b>        | <b>2,600,000</b> | <b>1,315,827</b> | <b>(27,373)</b> | <b>\$ 278,635,900</b> | <b>\$ 140,085,216</b> | <b>\$ 483,016</b> |  |
| <i>Subtotals YTD</i> | <i>1,343,200</i> | <i>1,315,827</i> | <i>(27,373)</i> | <i>\$ 139,602,200</i> | <i>\$ 140,085,216</i> | <i>\$ 483,016</i> |  |

11





## Accounts Receivable Aging Balances as of January 31, 2018

### Water Fund

#### Detroit Water and Sewerage Department

| Sales Class                | # of Accounts  | Avg. Balance     | Current             | > 30 Days           | > 60 Days           | > 180 Days          | TOTAL A/R BALANCE    |
|----------------------------|----------------|------------------|---------------------|---------------------|---------------------|---------------------|----------------------|
| RESIDENTIAL                | 181,886        | \$ 91.69         | \$ 2,687,577        | \$ 1,409,745        | \$ 3,017,274        | \$ 9,563,032        | \$ 16,677,629        |
|                            |                |                  | 16.1%               | 8.5%                | 18.1%               | 57.3%               | 100.0%               |
| COMMERCIAL                 | 10,713         | 345.88           | 1,819,118           | 346,647             | 1,192,383           | 347,288             | 3,705,436            |
|                            |                |                  | 49.1%               | 9.4%                | 32.2%               | 9.4%                | 100.0%               |
| INDUSTRIAL                 | 1,282          | 392.42           | 813,626             | 210,657             | (211,959)           | (309,237)           | 503,087              |
|                            |                |                  | 161.7%              | 41.9%               | (42.1%)             | (61.5%)             | 100.0%               |
| TAX EXEMPT                 | 437            | 1,037.48         | 230,073             | 97,674              | 72,448              | 53,185              | 453,379              |
|                            |                |                  | 50.7%               | 21.5%               | 16.0%               | 11.7%               | 100.0%               |
| FAITH BASED                | 657            | 300.74           | 36,200              | 15,135              | 44,576              | 101,677             | 197,587              |
|                            |                |                  | 18.3%               | 7.7%                | 22.6%               | 51.5%               | 100.0%               |
| CITY OF DETROIT            | 892            | 2,131.71         | 124,187             | 85,645              | 1,598,130           | 93,527              | 1,901,489            |
|                            |                |                  | 6.5%                | 4.5%                | 84.0%               | 4.9%                | 100.0%               |
| WAYNE STATE                | 2              | 28.97            | 58                  | -                   | -                   | -                   | 58                   |
|                            |                |                  | 100.0%              | 0.0%                | 0.0%                | 0.0%                | 100.0%               |
| <b>Total</b>               | <b>195,869</b> | <b>\$ 119.67</b> | <b>\$ 5,710,838</b> | <b>\$ 2,165,504</b> | <b>\$ 5,712,851</b> | <b>\$ 9,849,472</b> | <b>\$ 23,438,665</b> |
| <i>% of Total DWSD A/R</i> |                |                  | 24.4%               | 9.2%                | 24.4%               | 42.0%               | 100.0%               |

12



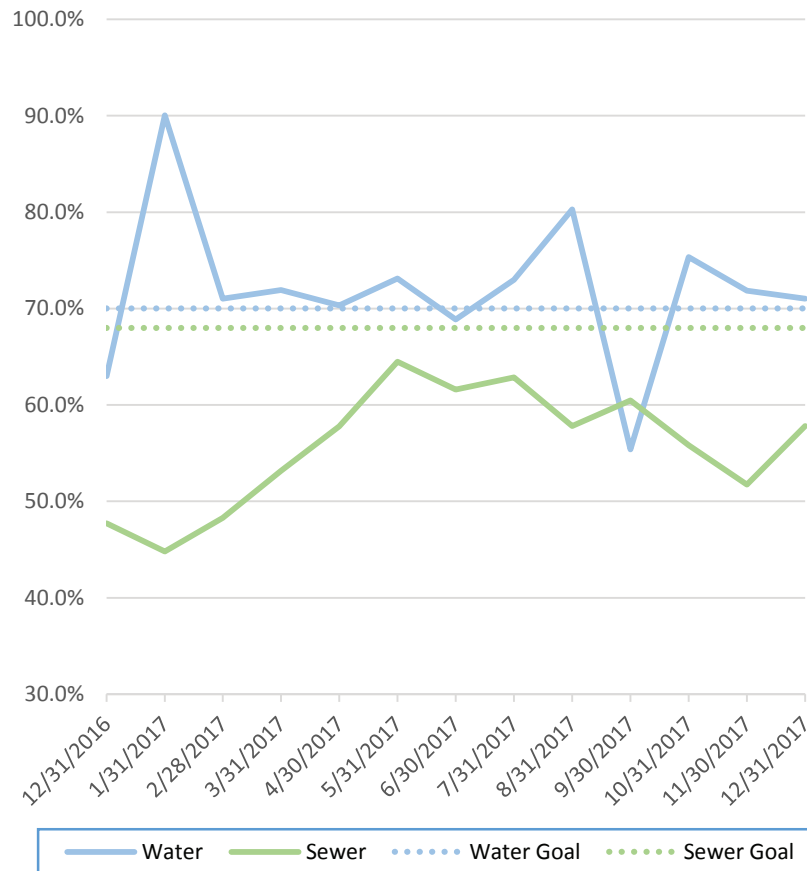
## Accounts Receivable Aging Balances as of January 31, 2018

### Sewer Fund

#### Detroit Water and Sewerage Department

| Sales Class                | # of Accounts  | Avg. Balance     | Current              | > 30 Days           | > 60 Days            | > 180 Days           | TOTAL A/R BALANCE    |
|----------------------------|----------------|------------------|----------------------|---------------------|----------------------|----------------------|----------------------|
| RESIDENTIAL                | 174,616        | \$ 257.30        | \$ 7,803,733         | \$ 4,462,233        | \$ 10,148,464        | \$ 22,514,709        | \$ 44,929,139        |
|                            |                |                  | 17.4%                | 9.9%                | 22.6%                | 50.1%                | 100.0%               |
| COMMERCIAL                 | 19,230         | 981.65           | 5,227,439            | 1,465,859           | 7,099,217            | 5,084,630            | 18,877,145           |
|                            |                |                  | 27.7%                | 7.8%                | 37.6%                | 26.9%                | 100.0%               |
| INDUSTRIAL                 | 3,380          | 2,749.31         | 2,669,743            | 1,358,087           | 3,445,381            | 1,819,451            | 9,292,662            |
|                            |                |                  | 28.7%                | 14.6%               | 37.1%                | 19.6%                | 100.0%               |
| TAX EXEMPT                 | 2,848          | 2,646.86         | 1,735,893            | 991,354             | 3,597,847            | 1,213,154            | 7,538,248            |
|                            |                |                  | 23.0%                | 13.2%               | 47.7%                | 16.1%                | 100.0%               |
| FAITH BASED                | 687            | 1,940.52         | 167,552              | 252,265             | 289,132              | 624,186              | 1,333,135            |
|                            |                |                  | 12.6%                | 18.9%               | 21.7%                | 46.8%                | 100.0%               |
| CITY OF DETROIT            | 3,424          | 1,906.63         | 826,163              | 758,938             | 2,394,815            | 2,548,398            | 6,528,314            |
|                            |                |                  | 12.7%                | 11.6%               | 36.7%                | 39.0%                | 100.0%               |
| WAYNE STATE                | 9              | 2,664.05         | 2,404                | 2,314               | 9,265                | 9,993                | 23,976               |
|                            |                |                  | 10.0%                | 9.7%                | 38.6%                | 41.7%                | 100.0%               |
| HIGHWAY DRAINAGE           | 2              | 1,001,868.54     | 257,193              | 257,193             | 781,481              | 707,871              | 2,003,737            |
|                            |                |                  | 12.8%                | 12.8%               | 39.0%                | 35.3%                | 100.0%               |
| <b>Total</b>               | <b>204,196</b> | <b>\$ 443.33</b> | <b>\$ 18,690,121</b> | <b>\$ 9,548,243</b> | <b>\$ 27,765,601</b> | <b>\$ 34,522,393</b> | <b>\$ 90,526,357</b> |
| <i>% of Total DWSD A/R</i> |                |                  | 20.6%                | 10.5%               | 30.7%                | 38.1%                | 100.0%               |

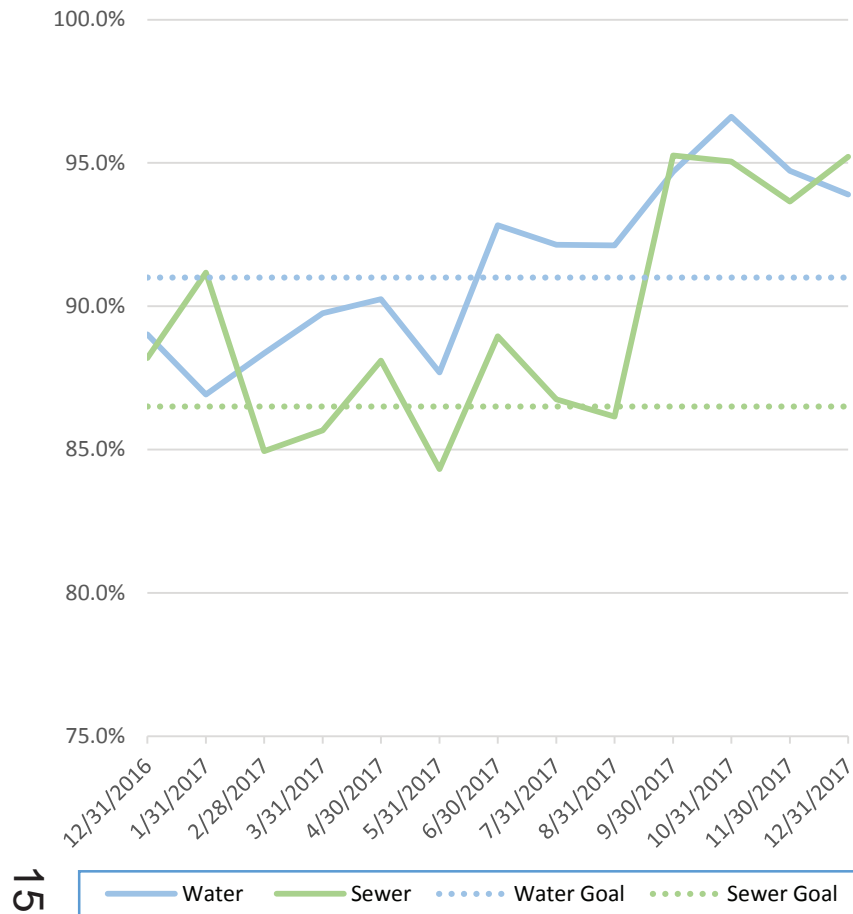
## 30-60 Day Collection Rate



- Water is slightly above target, but would expect it to trend up when shut offs begin.
- Sewer remains below target due to drainage collection rates.

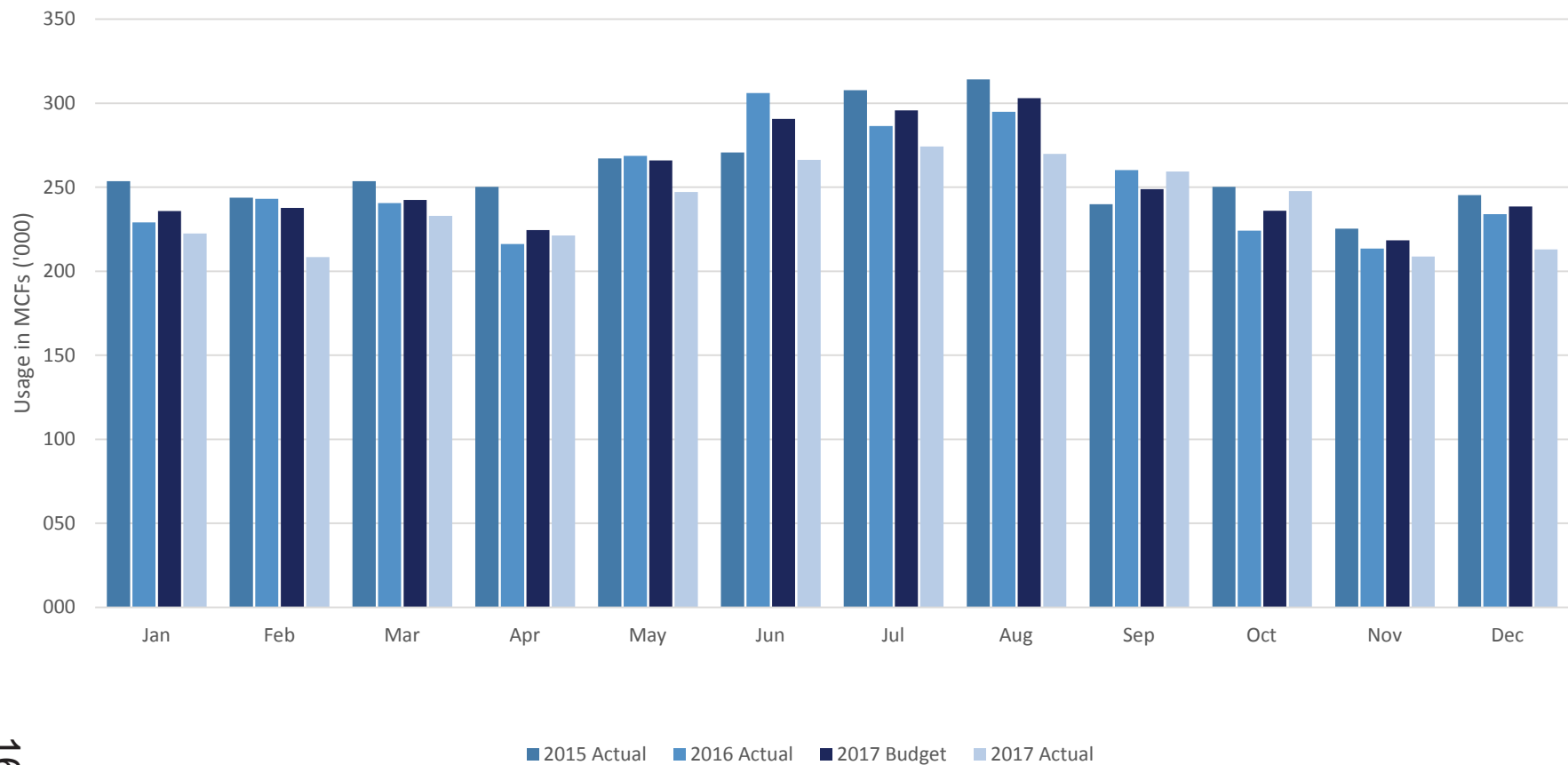
14

## 330 – 360 Day Collection Rate



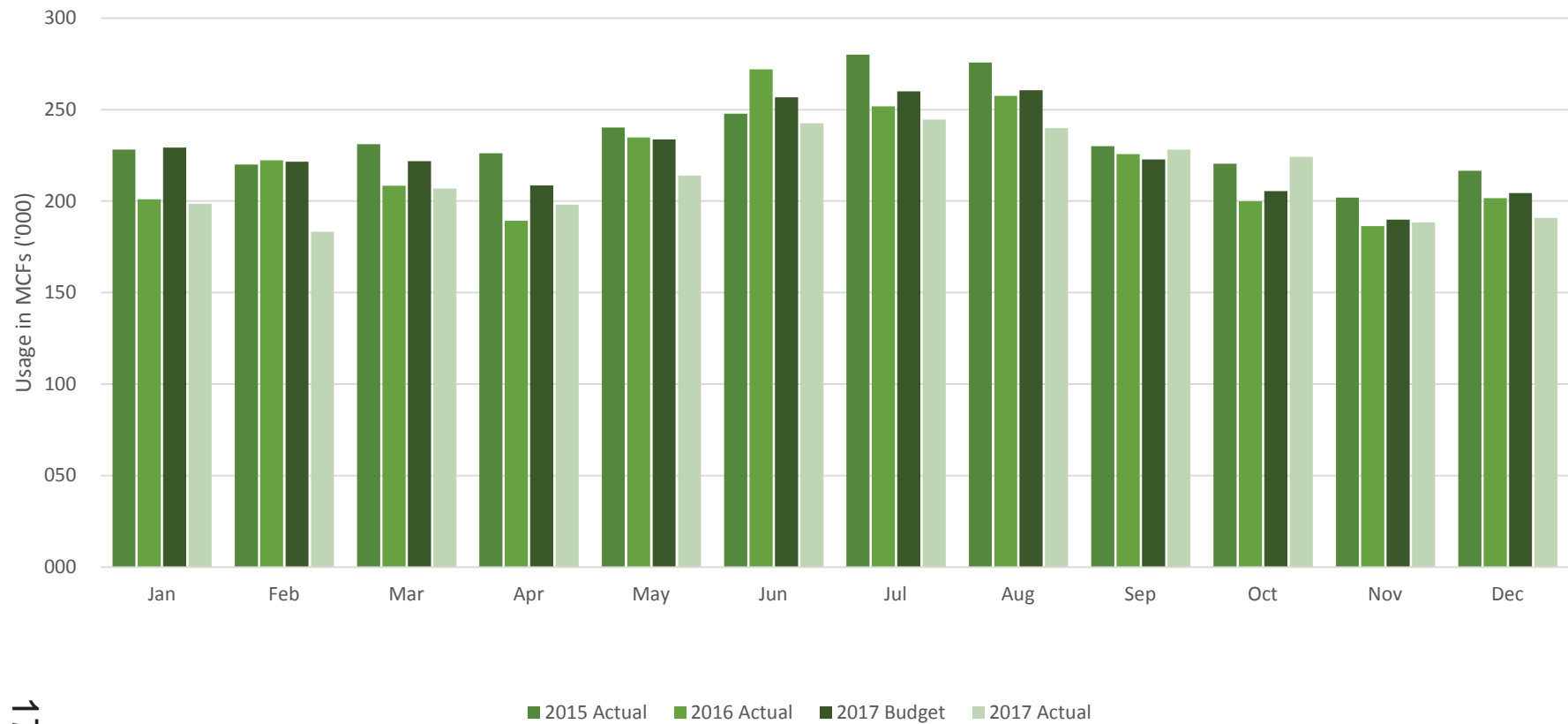
- Collection rates have been trending upwards over the last 12 months.
- We expect the trend to continue through FY 2018.

# Water Usage



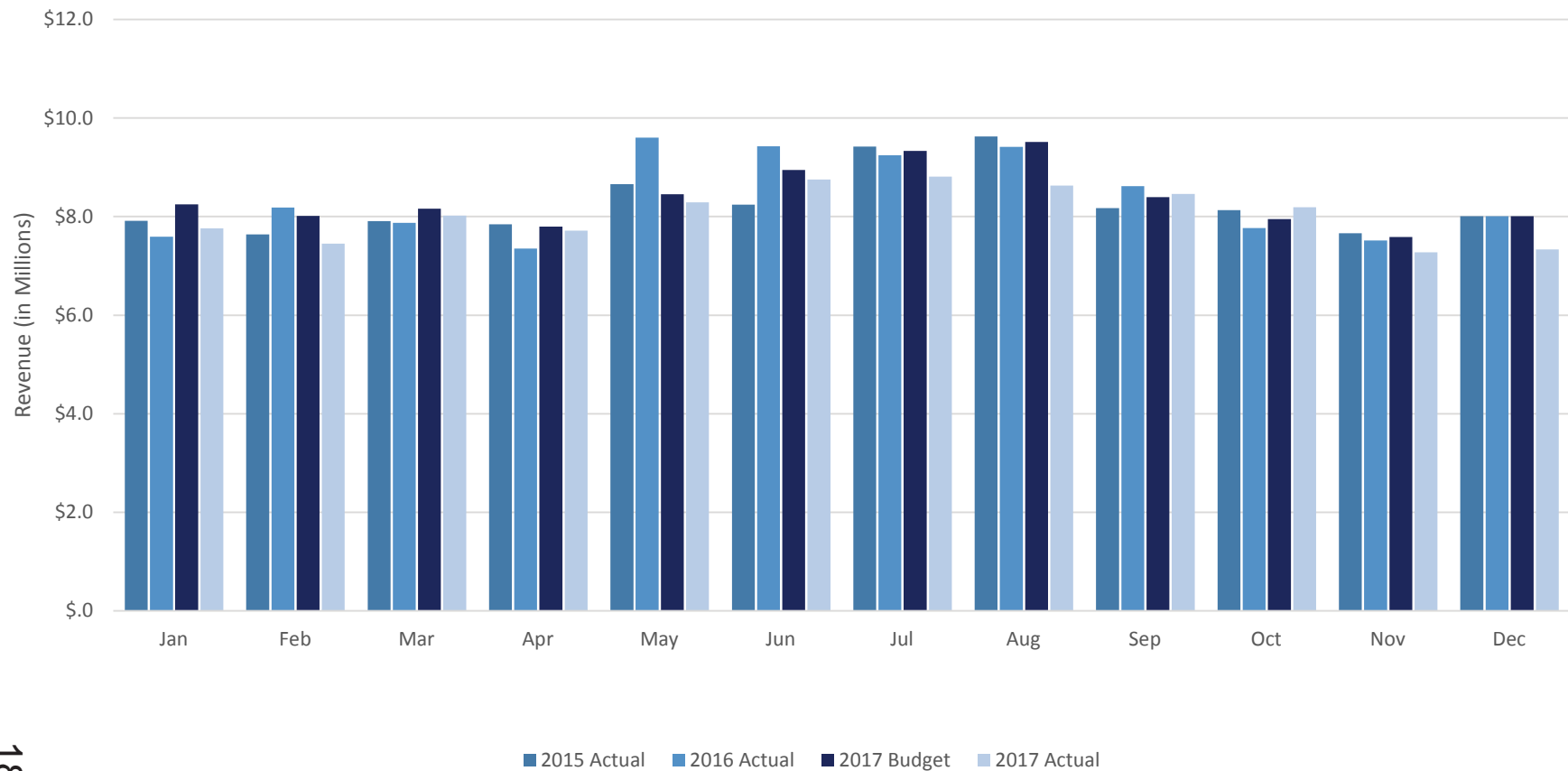


# Sewer Usage

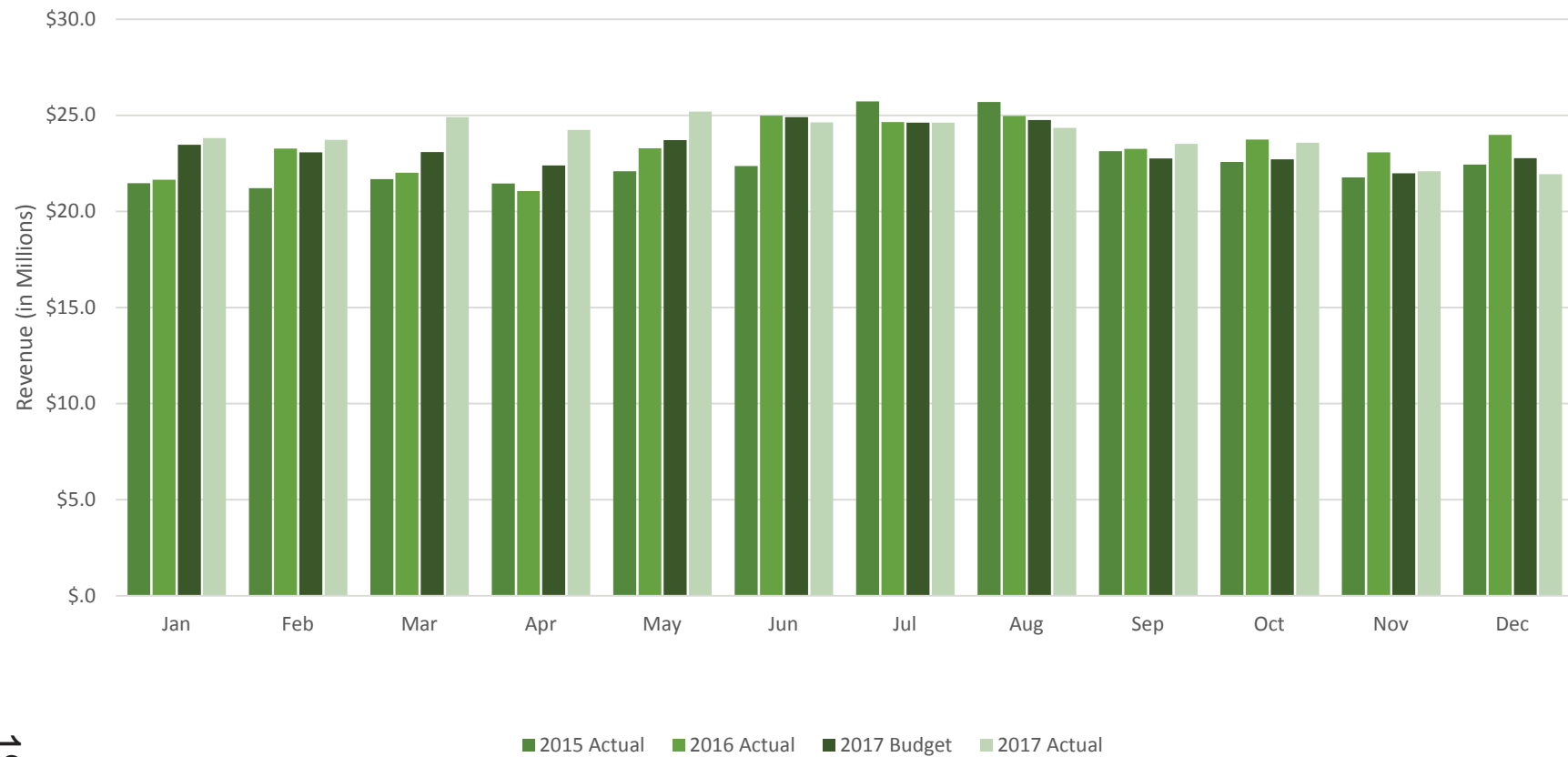


17

# Water Revenue



# Sewer Revenue





# Treasury Update

Nikole Howard-Whitsett  
Treasury Manager

# Cash Balance Summary



|                                  | Water Fund                  |                             | Sewer Fund                  |                             |
|----------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
|                                  | 6/30/2017                   | 1/31/2018                   | 6/30/2017                   | 1/31/2018                   |
| <b>Operating</b>                 | \$ 1,767,951                | \$ 2,483,924                | \$ 21,041,345               | \$ 29,923,780               |
| <b>Restricted</b>                |                             |                             |                             |                             |
| Bond                             | 43,338,112                  | 29,082,035                  | -                           | -                           |
| Affordability                    | 977,278                     | 1,094,800                   | -                           | -                           |
| Pension                          | 218,285                     | 2,171,235                   | 171,239                     | 1,641,230                   |
| Retainage                        | 2,488,101                   | 2,277,068                   | 1,106,171                   | 1,246,447                   |
| Construction                     | <u>2,109,646</u>            | <u>1,310,132</u>            | <u>834,367</u>              | <u>221,876</u>              |
|                                  | 49,131,420                  | 35,935,269                  | 2,111,777                   | 3,109,553                   |
| <b>Improvement and Extension</b> | <u>36,425,537</u>           | <u>54,138,455</u>           | <u>12,446,472</u>           | <u>20,241,690</u>           |
| <b>Total Cash</b>                | <u><b>\$ 87,324,908</b></u> | <u><b>\$ 92,557,648</b></u> | <u><b>\$ 35,599,594</b></u> | <u><b>\$ 53,275,023</b></u> |





# Cash Balance by Banking Institution

| Banking Institution | Type of Account | Water                | Sewer                |
|---------------------|-----------------|----------------------|----------------------|
| Comerica            |                 |                      |                      |
|                     | Unrestricted    | \$ 562,620           | \$ 501,387           |
|                     | Restricted      | 19,924,514           | 7,499,900            |
|                     |                 | 20,487,134           | 8,001,287            |
| First Independence  |                 |                      |                      |
|                     | Unrestricted    | 1,911,360            | 29,420,556           |
|                     | Restricted      | 28,883,514           | 5,390,844            |
|                     | CDARS           | 28,788,215           |                      |
|                     |                 | 59,583,089           | 34,811,400           |
| JP Morgan Chase     |                 |                      |                      |
|                     | Unrestricted    | 9,943                | 1,836                |
|                     | Restricted      | 1,094,800            | -                    |
|                     |                 | 1,104,743            | 1,836                |
| US Bank             |                 |                      |                      |
|                     | Restricted      | 11,382,683           | 10,460,499           |
|                     |                 | 11,382,683           | 10,460,499           |
| <b>Total Cash</b>   |                 | <b>\$ 92,557,649</b> | <b>\$ 53,275,022</b> |

# Insured Cash By Banking Institution



| <b>Banking Institution</b> | <b>Insured</b>       | <b>Uninsured</b>     |
|----------------------------|----------------------|----------------------|
| Comerica                   | \$ 1,064,757         | \$ 27,423,664        |
| First Independence         | 85,445,806           | 8,948,683            |
| JP Morgan Chase            | 261,780              | 844,800              |
| US Bank                    | 500,000              | 21,343,182           |
| <b>Total Cash</b>          | <b>\$ 87,272,343</b> | <b>\$ 58,560,328</b> |



# Appendix:

## Financial Statements

Seven Months Ended January 31, 2018

| City of Detroit Water Fund                       |                            |                                 |  |
|--|----------------------------|---------------------------------|--|
| Statement of Net Position                        |                            |                                 |  |
|  | June 30, 2017<br>(Audited) | January 31, 2017<br>(Unaudited) |  |
| <b>Assets</b>                                    |                            |                                 |  |
| Cash and cash equivalents                        | \$ 2,043,278               | \$ 5,554,479                    |  |
| Restricted - Cash and investments                | 88,025,572                 | \$ 89,422,826                   |  |
| Accounts receivable - Net of Allowance           | 18,021,231                 | \$ 14,494,312                   |  |
| Due from other funds                             | 57,344,256                 | \$ 38,458,252                   |  |
| Inventory  | 4,171,425                  | \$ 4,171,425                    |  |
| Prepaid expenses                                 | 279,533                    | \$ 279,533                      |  |
| Receivables from Great Lakes Water Authority     | 484,425,988                | \$ 481,831,303                  |  |
| Capital assets - net                             | 515,018,766                | \$ 508,105,227                  |  |
| Total assets                                     | 1,169,330,049              | 1,142,317,357                   |  |
| <b>Deferred Outflows of Resources - Pensions</b> | 16,184,679                 | 16,184,679                      |  |

| City of Detroit Water Fund                     |                            |                                 |
|--|----------------------------|---------------------------------|
| Statement of Net Position (Continued)          |                            |                                 |
|  | June 30, 2017<br>(Audited) | January 31, 2017<br>(Unaudited) |
| <b>Liabilities</b>                             |                            |                                 |
| Current liabilities:                           |                            |                                 |
| Accounts and contracts payable                 | \$ 3,990,264               | \$ 7,334,812                    |
| Due to other funds                             | 38,268,404                 | \$ 38,585,362                   |
| Due to Great Lakes Water Authority             | 32,908,024                 | \$ (15,006,179)                 |
| Accrued interest                               | 1,901,626                  | \$ 17,265,564                   |
| Other liabilities                              | 17,086,637                 | \$ 25,791,396                   |
| Accrued compensated absences                   | 1,455,747                  | \$ 1,455,747                    |
| Long-term debt                                 | 552,160,155                | \$ 534,364,917                  |
| Net pension liability                          | 50,867,233                 | \$ 50,867,233                   |
| Total liabilities                              | 698,638,090                | 660,658,852                     |
| <b>Deferred Inflows of Resources -Pensions</b> | 5,314,746                  | 5,315,446                       |
| <b>Net Position</b>                            |                            |                                 |
| Fund Balance - End of year                     | 481,561,893                | 492,527,737                     |
| <b>Total net position</b>                      | <b>\$ 481,561,893</b>      | <b>\$ 492,527,737</b>           |



| City of Detroit Water Fund                                       |  |           |                   |
|--|--|-----------|-------------------|
| Statement of Revenue, Expenses, and Changes in Fund Net Position |  |           |                   |
|  | Seven Months Ended<br>January 31, 2017 |           |                   |
|  | Accrual Basis                          |           | Contract Basis    |
| <b>Operating Revenue</b>   |  |           |                   |
| Retail sales - Detroit   | \$ 52,618,425                          | \$        | 52,618,425        |
| Other fees   | 1,960,242                              |           | 1,960,242         |
| Other revenue  | 1,739,428                              |           | 1,739,428         |
| Total operating revenue  | 56,318,095                             |           | 56,318,095        |
| <b>Operating Expenses</b>  |  |           |                   |
| Salaries, wages and benefits                                     | 8,932,086                              |           | 8,932,086         |
| Contractual Services   | 7,409,848                              |           | 7,409,848         |
| Other operating expense  | 3,777,885                              |           | 3,777,885         |
| Damage claims  | 662                                    |           | 662               |
| Wholesale Charges  | 8,826,183                              |           | 8,826,183         |
| Depreciation   | 22,102,262                             |           | -                 |
| Total operating expenses   | 51,048,926                             |           | 28,946,664        |
| <b>Operating Income</b>  | 5,269,169                              |           | 27,371,431        |
| <b>Nonoperating Revenue (Expenses)</b>                           |  |           |                   |
| Investment income  | 184,540                                |           | 184,540           |
| Capital Lease  | 9,856,263                              |           | 13,171,408        |
| Capital Outlay/Acquisitions                                      | (284,542)                              |           | (284,542)         |
| Debt Service   | (15,363,938)                           |           | (22,393,184)      |
| Gain (loss) on sale of assets                                    | 19,554                                 |           | 19,554            |
| Total nonoperating expenses - Net                                | (5,588,124)                            |           | (9,302,224)       |
| <b>Change in Net Position</b>                                    | <b>\$ (318,955)</b>                    | <b>\$</b> | <b>18,069,206</b> |

| City of Detroit Sewage Disposal Fund             |                            |                                 |
|--|----------------------------|---------------------------------|
| Statement of Net Position                        |                            |                                 |
|  | June 30, 2017<br>(Audited) | January 31, 2017<br>(Unaudited) |
| <b>Assets</b>                                    |                            |                                 |
| Cash and cash equivalents                        | \$ 21,211,137              | \$ 30,837,063                   |
| Restricted - Cash and investments                | 22,632,710                 | 29,164,955                      |
| Accounts receivable - Net of Allowance           | 71,549,286                 | 71,702,638                      |
| Due from other funds                             | 23,122,190                 | 36,274,324                      |
| Inventory  | 1,053,886                  | 1,053,886                       |
| Prepaid expenses                                 | 169,728                    | 169,728                         |
| Receivables from Great Lakes Water Authority     | 607,272,122                | 604,288,078                     |
| Capital assets - net                             | 486,025,515                | 479,941,930                     |
| Total assets                                     | 1,233,036,574              | 1,253,432,602                   |
| <b>Deferred Outflows of Resources - Pensions</b> | 11,440,084                 | 11,440,084                      |

| City of Detroit Sewage Disposal Fund           |                            |                                 |
|--|----------------------------|---------------------------------|
| Statement of Net Position (Continued)          |                            |                                 |
|  | June 30, 2017<br>(Audited) | January 31, 2017<br>(Unaudited) |
| <b>Liabilities</b>                             |                            |                                 |
| Current liabilities:                           |                            |                                 |
| Accounts and contracts payable                 | \$ 1,532,828               | \$ 2,570,365                    |
| Due to other funds                             | 42,178,718                 | 88,330,366                      |
| Due to Great Lakes Authority                   | 83,522,446                 | 62,274,246                      |
| Accrued interest                               | 3,169,374                  | 13,225,631                      |
| Other liabilities                              | 28,186,432                 | 29,941,944                      |
| Accrued compensated absences                   | 2,183,621                  | 2,183,621                       |
| Long-term debt                                 | 416,591,578                | 410,418,781                     |
| Net pension liability                          | 35,306,921                 | 35,306,921                      |
| Total liabilities                              | 612,671,918                | 644,251,875                     |
| <b>Deferred Inflows of Resources -Pensions</b> | 4,062,753                  | 4,064,053                       |
| <b>Net Position</b>                            |                            |                                 |
| Fund Balance - End of year                     | 627,741,988                | 616,556,759                     |
| <b>Total net position</b>                      | <b>\$ 627,741,988</b>      | <b>\$ 616,556,759</b>           |

# City of Detroit Sewage Disposal Fund

## Statement of Revenue, Expenses, and Changes in Fund Net Position

|  | Seven Months Ended<br>January 31, 2017 |                   |
|--|--|-------------------|
|  | Accrual Basis                          | Contract Basis    |
| <b>Operating Revenue</b>               |  |                   |
| Retail sales - Detroit                 | \$ 135,235,335                         | \$ 135,235,335    |
| Other fees                             | 4,688,816                              | 4,688,816         |
| Other revenue                          | 2,660,447                              | 2,660,447         |
| Total operating revenue                | 142,584,598                            | 142,584,598       |
| <b>Operating Expenses</b>              |  |                   |
| Salaries, wages and benefits           | 26,387,104                             | 26,387,104        |
| Contractual Services                   | 5,616,040                              | 5,616,040         |
| Other operating expense                | 3,957,281                              | 3,957,281         |
| Damage claims                          | 12,829                                 | 12,829            |
| Wholesale Charges                      | 104,398,700                            | 104,398,700       |
| Depreciation                           | 15,000,543                             | -                 |
| Total operating expenses               | 155,372,497                            | 140,371,954       |
| <b>Operating Income</b>                | (12,787,899)                           | 2,212,644         |
| <b>Nonoperating Revenue (Expenses)</b> |  |                   |
| Investment earnings                    | -                                      | -                 |
| Capital Lease                          | 12,046,547                             | 16,041,667        |
| Capital Outlay/Acquisitions            | (387,620)                              | (387,620)         |
| Debt Service                           | (10,056,257)                           | (17,431,186)      |
| Gain (loss) on sale of assets          | -                                      | -                 |
| Total nonoperating expenses - Net      | 1,602,670                              | (1,777,140)       |
| <b>Change in Net Position</b>          | <b>\$ (11,185,229)</b>                 | <b>\$ 435,504</b> |

# Thank You



[facebook.com/DWSDDetroit](https://facebook.com/DWSDDetroit)



[@DetroitWaterDep](https://twitter.com/DetroitWaterDep)



[@detroitwatersewerage](https://instagram.com/detroitwatersewerage)





## **Financial Services Audit Committee Communication**

### **INFORMATION**

Item 10C - City of Detroit Water and Sewerage Department Proposed FY 2019 Budget as of February 7, 2018



# **PROPOSED DWSD BUDGET**

**FY 2019**

February 7, 2018



# Vision and Strategic Priorities

- **Vision**

- We are nationally recognized for our operations, service, green stormwater infrastructure, and contributions to making Detroit a great place to live and work.

- **Strategic Priorities**

- Put health and safety first
- Strengthen our assets
- Enhance the customer experience
- Keep rates fair and affordable
- Make Detroit green



## Updates to Budget

- Rate increases are now 4% for both Water and Sewer.
- Firelines have no increase.
- Drainage charges are transitioned for residential and “faith based” customers.
- Wholesale charges increased based on preliminary GLWA calculations.

## Sources and Uses of Funds

### Water Operating Fund

|  | Restated<br>Budget<br>2018 | Estimated<br>Requirements<br>2019 | Increase<br>(Decrease) | % Change     |
|--|----------------------------|-----------------------------------|------------------------|--------------|
| <b><u>Estimated Revenues</u></b>         |                            |                                   |                        |              |
| Gross Retail Sales                       | \$ 99,994,000              | \$ 101,569,300                    | \$ 1,575,300           | 1.6%         |
| Less: Bad Debt Expense                   | (10,789,000)               | (11,040,000)                      | (251,000)              | 2.3%         |
| Net Retail Sales                         | 89,205,000                 | 90,529,300                        | 1,324,300              | 1.5%         |
| Capital Lease Receipts                   | 22,500,000                 | 22,500,000                        | -                      | 0.0%         |
| Ownership Equity Credit                  | 20,700,000                 | 20,700,000                        | -                      | 0.0%         |
| Shared Service Revenue                   | 3,026,000                  | 1,677,000                         | (1,349,000)            | -44.6%       |
| Other Revenue                            | 4,750,000                  | 3,000,000                         | (1,750,000)            | -36.8%       |
| <b>Total Estimated Water Revenue</b>     | <b>\$ 140,181,000</b>      | <b>\$ 138,406,300</b>             | <b>\$ (1,774,700)</b>  | <b>-1.3%</b> |
| <b><u>Revenue Requirement</u></b>        |                            |                                   |                        |              |
| <b><u>Operating Requirement</u></b>      |                            |                                   |                        |              |
| O&M Controllable Expense                 | \$ 42,569,000              | \$ 41,535,700                     | \$ (1,033,300)         | -2.4%        |
| WRAP Requirement                         | 1,028,000                  | 406,300                           | (621,700)              | -60.5%       |
| Wholesale Charges                        | 35,831,000                 | 41,026,100                        | 5,195,100              | 14.5%        |
| Total Operating                          | 79,428,000                 | 82,968,100                        | 3,540,100              | 4.5%         |
| <b><u>Non-Operating Requirements</u></b> |                            |                                   |                        |              |
| Obligation to GLWA                       | 34,314,000                 | 34,443,000                        | 129,000                | 0.4%         |
| Non-Operating Pension                    | 4,422,000                  | 4,427,400                         | 5,400                  | 0.1%         |
| Extraordinary Repair & Replacement       | 52,000                     | -                                 | (52,000)               | -100.0%      |
| Budget Stabilization                     | (2,081,000)                | -                                 | 2,081,000              | -100.0%      |
| DWSD Debt Service                        | 2,600,000                  | 3,296,000                         | 696,000                | 26.8%        |
| Transfer to I&E                          | 21,446,000                 | 13,271,800                        | (8,174,200)            | -38.1%       |
| Total Non-Operating                      | 60,753,000                 | 55,438,200                        | (5,314,800)            | -8.7%        |
| <b>Total Revenue Requirement</b>         | <b>\$ 140,181,000</b>      | <b>\$ 138,406,300</b>             | <b>\$ (1,774,700)</b>  | <b>-1.3%</b> |



## Sources and Uses of Funds

### Sewer Operating Fund

|  | Restated<br>Budget<br>2018 | Estimated<br>Requirements<br>2019 | Increase<br>(Decrease) | % Change    |
|--|----------------------------|-----------------------------------|------------------------|-------------|
| <b><u>Estimated Revenues</u></b>         |                            |                                   |                        |             |
| Gross Retail Sales                       | \$ 279,161,000             | \$ 318,498,200                    | \$ 39,337,200          | 14.1%       |
| Less: Bad Debt Expense                   | (22,269,000)               | (46,327,000)                      | (24,058,000)           | 108.0%      |
| Net Retail Sales                         | 256,892,000                | 272,171,200                       | 15,279,200             | 5.9%        |
| Capital Lease Receipts                   | 27,500,000                 | 27,500,000                        | -                      | 0.0%        |
| Ownership Equity Credit                  | 5,516,000                  | 5,516,000                         | -                      | 0.0%        |
| Shared Service Revenue                   | 4,539,000                  | 2,516,000                         | (2,023,000)            | -44.6%      |
| Other Revenue                            | 5,000,000                  | 4,800,000                         | (200,000)              | -4.0%       |
| <b>Total Estimated Sewer Revenue</b>     | <b>\$ 299,447,000</b>      | <b>\$ 312,503,200</b>             | <b>\$ 13,056,200</b>   | <b>4.4%</b> |
| <b><u>Revenue Requirement</u></b>        |                            |                                   |                        |             |
| <b><u>Operating Requirement</u></b>      |                            |                                   |                        |             |
| O&M Controllable Expense                 | \$ 67,797,000              | \$ 71,861,500                     | \$ 4,064,500           | 6.0%        |
| WRAP Requirement                         | 1,998,000                  | 1,274,000                         | (724,000)              | -36.2%      |
| Wholesale Charges                        | 184,485,000                | 188,524,000                       | 4,039,000              | 2.2%        |
| Total Operating                          | 254,280,000                | 261,659,500                       | 7,379,500              | 2.9%        |
| <b><u>Non-Operating Requirements</u></b> |                            |                                   |                        |             |
| Obligation to GLWA                       | 27,393,000                 | 26,784,000                        | (609,000)              | -2.2%       |
| Non-Operating Pension                    | 3,067,000                  | 3,066,800                         | (200)                  | 0.0%        |
| Extraordinary Repair & Replacement       | 414,000                    | 364,700                           | (49,300)               | -11.9%      |
| Budget Stabilization                     | (2,299,000)                | 661,100                           | 2,960,100              | -128.8%     |
| DWSD Debt Service                        | -                          | -                                 | -                      | N/A         |
| Transfer to I&E                          | 16,592,000                 | 19,967,100                        | 3,375,100              | 20.3%       |
| Total Non-Operating                      | 45,167,000                 | 50,843,700                        | 5,676,700              | 12.6%       |
| <b>Total Revenue Requirement</b>         | <b>\$ 299,447,000</b>      | <b>\$ 312,503,200</b>             | <b>\$ 13,056,200</b>   | <b>4.4%</b> |

# Water Revenue Summary



| Water Retail Sales     |                      |                       |                        |             |
|------------------------|----------------------|-----------------------|------------------------|-------------|
|                        | Estimated<br>2018    | Estimated<br>2019     | Increase<br>(Decrease) | % Change    |
| <b>Service Charges</b> |                      |                       |                        |             |
| Mcf Charges            | \$ 68,260,800        | \$ 69,393,900         | \$ 1,133,100           | 1.7%        |
| Service Charges        | 23,813,100           | 24,765,600            | 952,500                | 4.0%        |
| Fireline Charges       | 3,031,200            | 3,031,200             | -                      | 0.0%        |
| Other Retail Charges   | 2,889,800            | 2,868,200             | (21,600)               | -0.7%       |
| Penalties              | 1,357,700            | 1,510,400             | 152,700                | 11.2%       |
| <b>Totals</b>          | <b>\$ 99,352,600</b> | <b>\$ 101,569,300</b> | <b>\$ 2,216,700</b>    | <b>2.2%</b> |
| <b>Customer Class</b>  |                      |                       |                        |             |
| Industrial             | \$ 13,906,500        | \$ 14,235,000         | \$ 328,500             | 2.4%        |
| Commercial             | 24,758,200           | 25,228,200            | 470,000                | 1.9%        |
| Residential            | 49,657,800           | 50,796,600            | 1,138,800              | 2.3%        |
| City of Detroit        | 6,660,700            | 6,781,100             | 120,400                | 1.8%        |
| Wayne State            | 891,100              | 907,800               | 16,700                 | 1.9%        |
| Tax Exempt             | 2,846,500            | 2,972,400             | 125,900                | 4.4%        |
| Faith-Based            | 631,600              | 648,100               | 16,500                 | 2.6%        |
| Highway Drainage       |                      |                       |                        |             |
| <b>Totals</b>          | <b>\$ 99,352,400</b> | <b>\$ 101,569,200</b> | <b>\$ 2,216,800</b>    | <b>2.2%</b> |

- Assumes 4% Water rate increase.
- Results in Retail Sales Increase of 2.2%.
- Expected Collection Rate of 90%.

# Sewer Revenue Summary



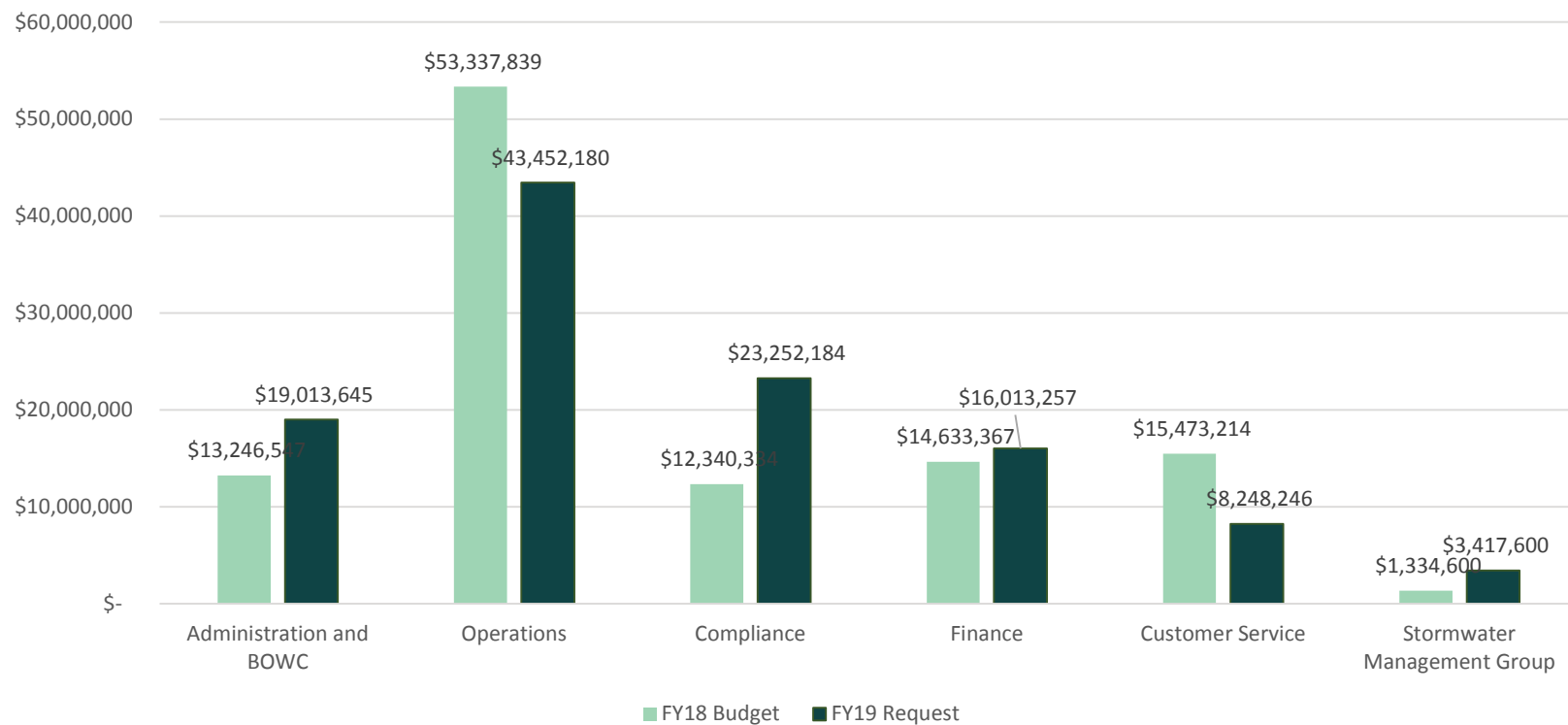
| Sewer Retail Sales     |                       |                       |                        |              |
|------------------------|-----------------------|-----------------------|------------------------|--------------|
|                        | Estimated<br>2018     | Estimated<br>2019     | Increase<br>(Decrease) | % Change     |
| <b>Service Charges</b> |                       |                       |                        |              |
| Mcf Charges            | \$ 134,136,400        | \$ 136,711,800        | \$ 2,575,400           | 1.9%         |
| Service Charges        | 12,680,300            | 13,187,500            | 507,200                | 4.0%         |
| Drainage Charges       | 129,205,600           | 163,634,300           | 34,428,700             | 26.6%        |
| Other Retail Charges   |                       |                       |                        |              |
| Penalties              | 4,854,100             | 4,964,600             | 110,500                | 2.3%         |
| <b>Totals</b>          | <b>\$ 280,876,400</b> | <b>\$ 318,498,200</b> | <b>\$ 37,621,800</b>   | <b>13.4%</b> |
| <b>Customer Class</b>  |                       |                       |                        |              |
| Industrial             | \$ 44,154,700         | \$ 44,948,800         | \$ 794,100             | 1.8%         |
| Commercial             | 84,394,500            | 82,265,300            | (2,129,200)            | -2.5%        |
| Residential            | 121,389,200           | 153,586,800           | 32,197,600             | 26.5%        |
| City of Detroit        | 13,021,400            | 12,920,000            | (101,400)              | -0.8%        |
| Wayne State            | 2,291,600             | 2,295,300             | 3,700                  | 0.2%         |
| Tax Exempt             | 9,997,000             | 15,506,700            | 5,509,700              | 55.1%        |
| Faith-Based            | 2,541,800             | 2,839,600             | 297,800                | 11.7%        |
| Highway Drainage       | 3,086,300             | 4,135,800             | 1,049,500              | 34.0%        |
| <b>Totals</b>          | <b>\$ 280,876,500</b> | <b>\$ 318,498,300</b> | <b>\$ 37,621,800</b>   | <b>13.4%</b> |

- Assumes 4% Rate increase.
- Rollout of Drainage Rates for residential and faith-based classes.
- Results in Retail Sales increase of 13.4%.
- Expected Collection Rate of 88% for Sewer related charges and 83% for Drainage related charges.

# Operation and Maintenance – Controllable By Appropriation

| Operation & Maintenance Controllable Expense |                       |                       |                        |                   |
|--|-----------------------|-----------------------|------------------------|-------------------|
|  | Budget<br>2018        | Budget<br>2019        | Increase<br>(Decrease) | Percent<br>Change |
| <b>Summary by Fund</b>                       |                       |                       |                        |                   |
| Water Fund                                   | \$ 42,569,300         | \$ 41,535,800         | \$ (1,033,500)         | -2.4%             |
| Sewer Fund                                   | 67,796,500            | 71,861,500            | 4,065,000              | 6.0%              |
| <b>Total O&amp;M Appropriations</b>          | <b>\$ 110,365,800</b> | <b>\$ 113,397,300</b> | <b>\$ 3,031,500</b>    | <b>2.7%</b>       |
| <b>Summary by Appropriation Unit</b>         |                       |                       |                        |                   |
| BOWC and Administration                      | 13,246,500            | 19,013,600            | 5,767,100              | 43.5%             |
| Operations                                   | 53,337,800            | 43,452,200            | (9,885,600)            | -18.5%            |
| Compliance                                   | 12,340,300            | 23,252,200            | 10,911,900             | 88.4%             |
| Finance                                      | 10,254,800            | 16,013,300            | 5,758,500              | 56.2%             |
| Customer Service                             | 15,473,200            | 8,248,200             | (7,225,000)            | -46.7%            |
| Stormwater Drainage                          | 1,334,600             | 3,417,700             | 2,083,100              | 156.1%            |
| GLWA Shared Services                         | 4,378,600             | -                     | (4,378,600)            | -100.0%           |
| <b>Total O&amp;M Appropriations</b>          | <b>\$ 110,365,900</b> | <b>\$ 113,397,200</b> | <b>\$ 3,031,300</b>    | <b>2.7%</b>       |

# FY18 Comparison FY19 by Appropriation





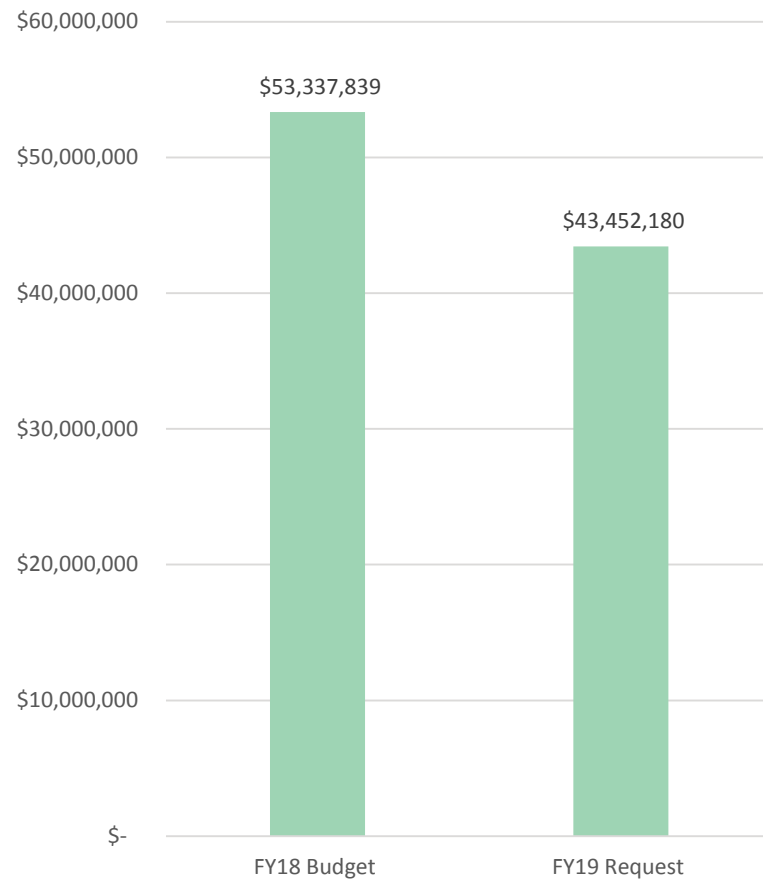
## Administration and BOWC



- Includes CEO, Security, and Public Affairs and new BOWC Cost Center
- Includes Compliance Management contract (\$875k)
- Transferred COO into Appropriation
- Allocated Shared Services (\$425k)
- Public Relations contract (\$875k)

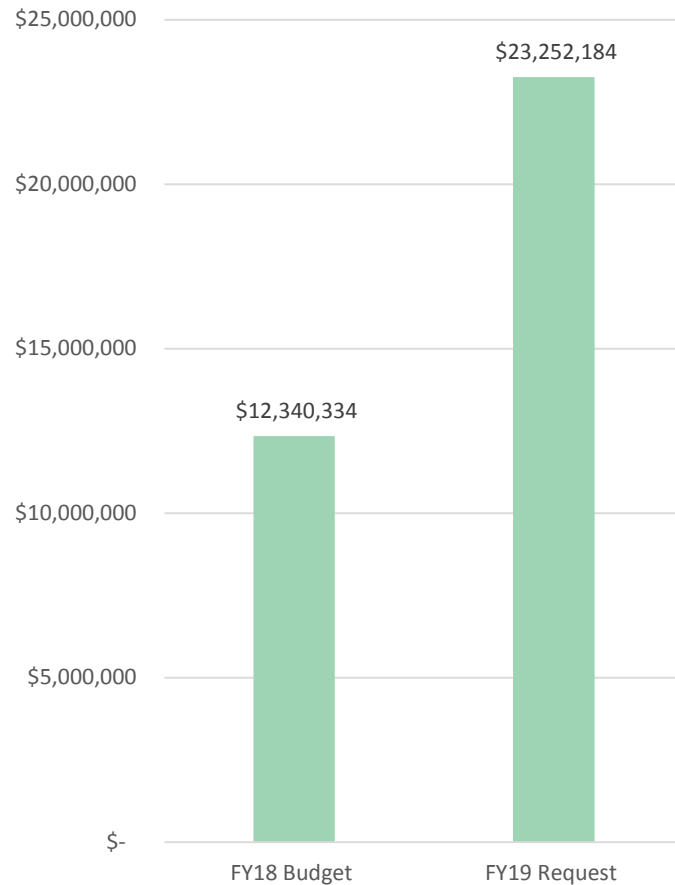


# Operations



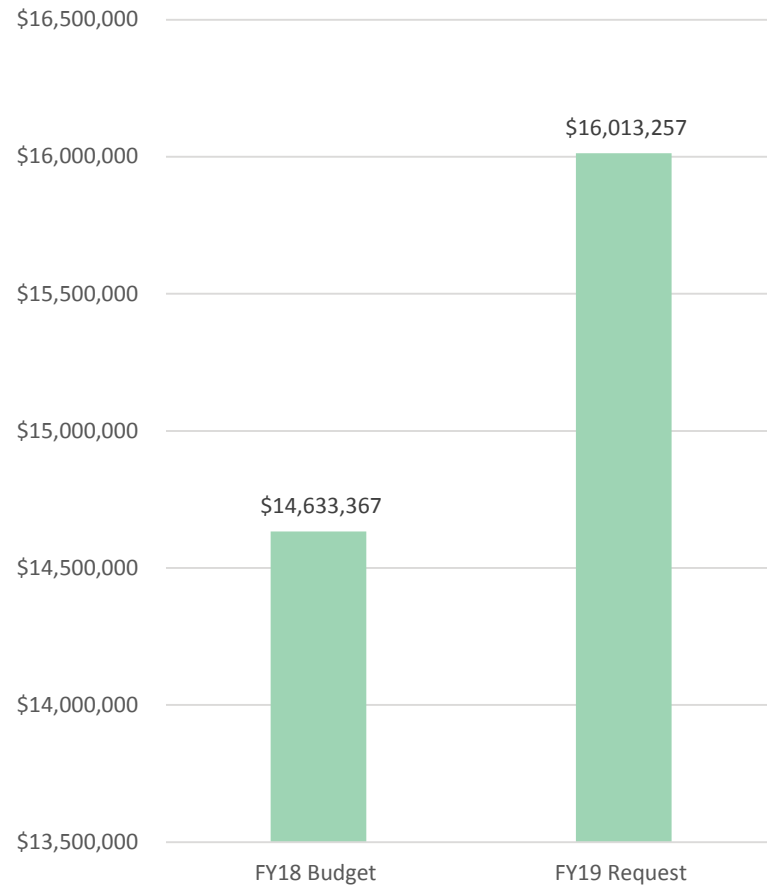
- New Appropriation for Stormwater Management Group
- Allocated Shared Services (\$1 M)
- Reduction in Utility Costs (\$2.3M)

# Compliance



- Includes Legal, Technology, and Organizational Development
- Allocated IT Shared Services (\$7.4 M)
- Reduction in Legal Services contracts (\$2.6 M)
- New contingency for damage and other claims (\$5 M)

# Finance



- Billing and Collections cost center moved from Customer Service. (\$5.3 M)
- Increase in toilet replacement program (\$1M)

# Customer Service



- Fleet, Facilities and Meter Operations transferred to Operations
- Billing and Collections section transferred to Finance (\$5.3 M)

# Stormwater Management



- New Appropriation for FY19
- 13 New Staff Positions
- 3 Staff Transferred from Operations
- Engineering Design, Tech Services and Consulting Contracts (\$1.7 M)

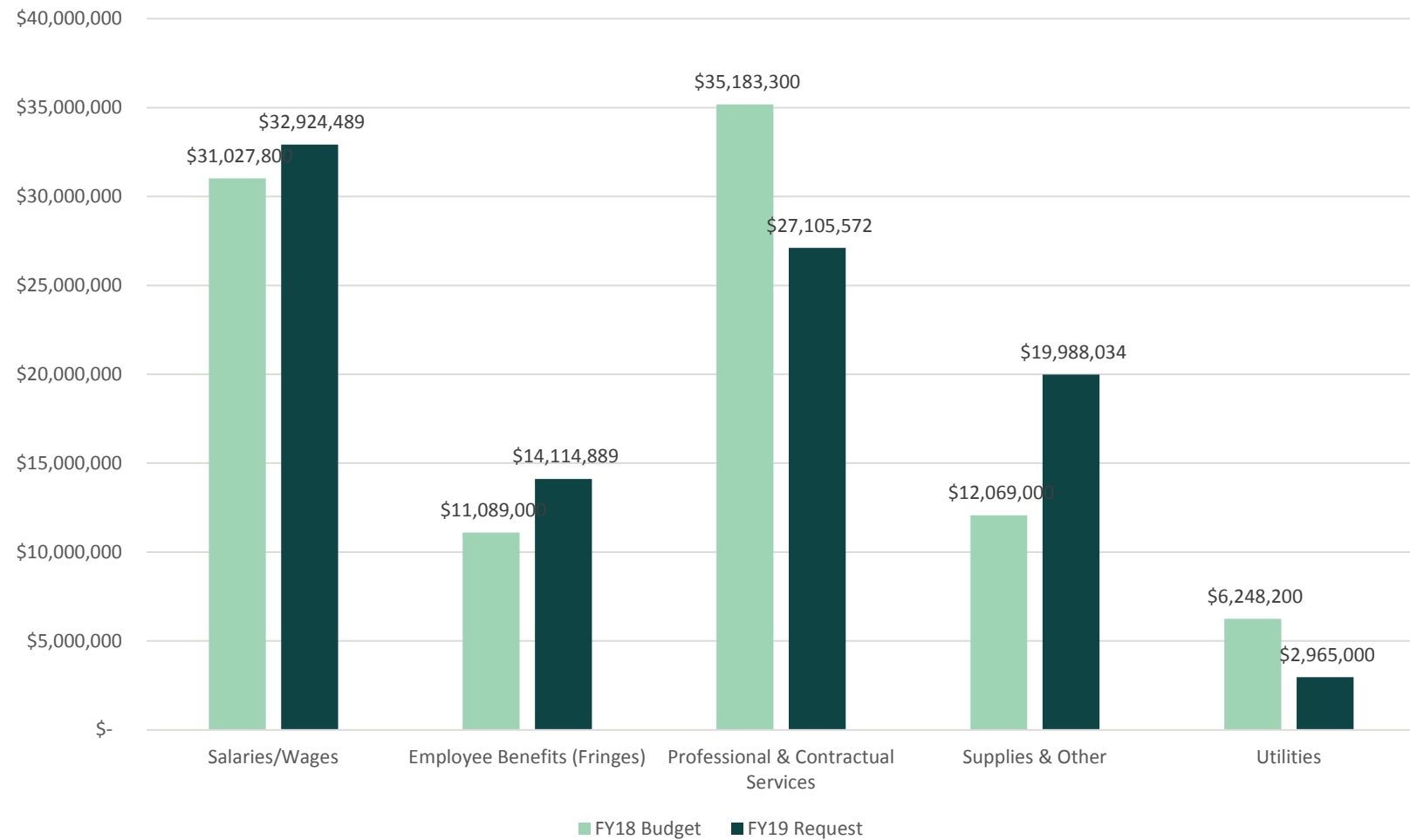
# Operation and Maintenance – Controllable By Object



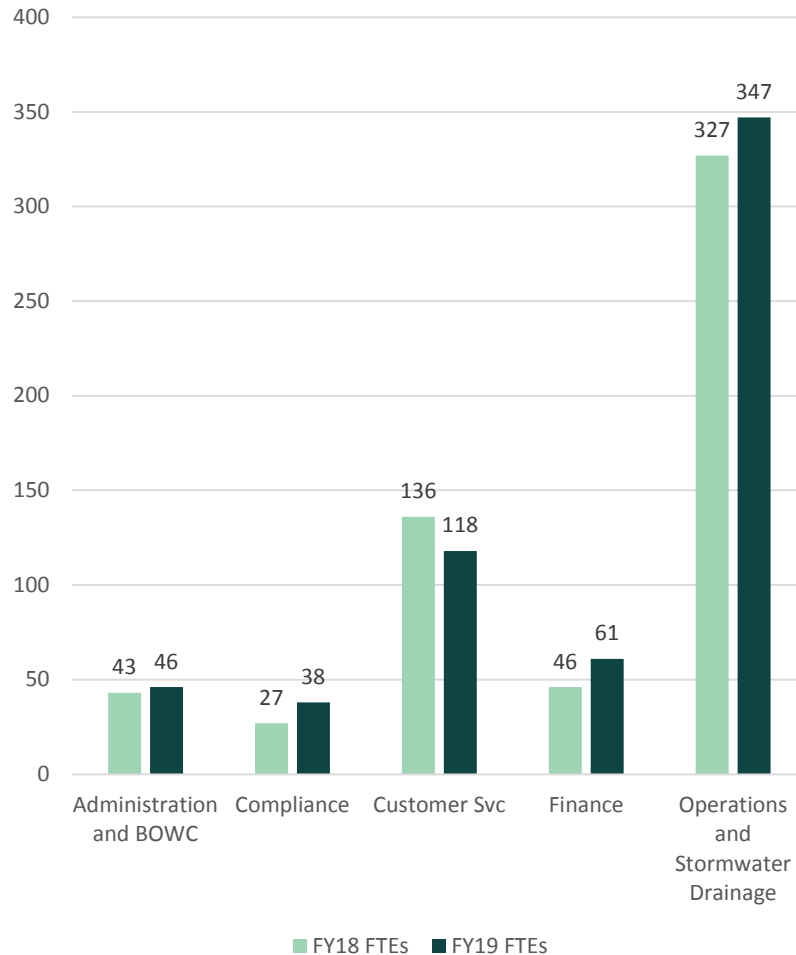
| Operation & Maintenance Controllable Expense |                       |                       |                        |                   |
|--|-----------------------|-----------------------|------------------------|-------------------|
|  | Budget<br>2018        | Budget<br>2019        | Increase<br>(Decrease) | Percent<br>Change |
| <b>Summary by Fund</b>                       |                       |                       |                        |                   |
| Water Fund                                   | \$ 42,569,300         | \$ 41,535,800         | \$ (1,033,500)         | -2.4%             |
| Sewer Fund                                   | 67,796,500            | 71,861,500            | 4,065,000              | 6.0%              |
| <b>Total O&amp;M Appropriations</b>          | <b>\$ 110,365,800</b> | <b>\$ 113,397,300</b> | <b>\$ 3,031,500</b>    | <b>2.7%</b>       |
| <b>Summary by Expense Object</b>             |                       |                       |                        |                   |
| Salaries/Wages                               | \$ 31,027,700         | \$ 32,924,500         | \$ 1,896,800           | 6.1%              |
| Employee Benefits (Fringes)                  | 11,088,900            | 14,114,900            | 3,026,000              | 27.3%             |
| Pension Reimbursement - Operating            | 7,200,000             | 7,494,200             | 294,200                | 4.1%              |
| Professional & Contractual Services          | 35,183,200            | 27,105,600            | (8,077,600)            | -23.0%            |
| Shared Services Expense                      | 7,548,800             | 8,805,000             | 1,256,200              | 16.6%             |
| Supplies & Other                             | 12,069,100            | 19,988,000            | 7,918,900              | 65.6%             |
| Utilities                                    | 6,248,200             | 2,965,000             | (3,283,200)            | -52.5%            |
| <b>Total O&amp;M Appropriations</b>          | <b>\$ 110,365,900</b> | <b>\$ 113,397,200</b> | <b>\$ 3,031,300</b>    | <b>2.7%</b>       |



# FY 18 Comparison FY 19 by Expense

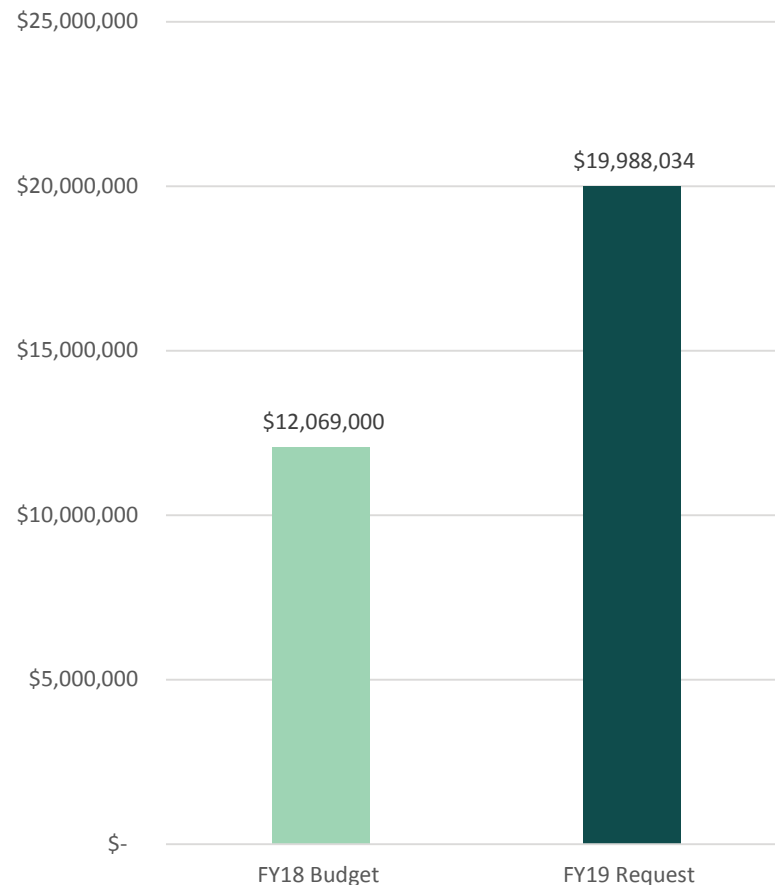


# Staff Requirements



- FY 18 Restated for Organizational Changes (apples to apples)
- FTEs increased from 579 to 610 (31 additional FTEs)
- 13 new FTEs are allocated to the Stormwater Management Group

# Supplies and Other Expenses



- New Contingency for damage and other claims (\$5 M)
- Supplies for Water and Sewer Repairs (\$3 M)
- Supplies for the repair and maintenance for facilities and fleet (\$700k)

# Summary



- Stormwater Management Group up and operational.
- Compliance Management, Public Relations, and Toilet Replacement initiatives funded.
- Impervious Acreage Billing extended to all customer classes.
- Decline in usage (Mcf) seems to be leveling.
- Tentative rate increases of 4% for both Water and Sewer.
- GLWA Wholesale charges not finalized.

# Thank You



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## **Financial Services Audit Committee Communication**

### **INFORMATION**

Item 10D - City of Detroit Water and Sewerage Department Preliminary FY 2019-2013 Capital Improvement Plan as of February 7, 2018





# **CAPITAL IMPROVEMENT PLAN**

## **PRELIMINARY DRAFT 2019-2023 CIP REPORT**

February 7, 2018



# Capital Improvement Plan

- This CIP should be considered a planning document – the CIP is an evolving plan that requires continual review and modification during the course of each year. The estimates indicated in the early years of the report are likely more precise than those in the later years.
- The following table details the planned expenditures for the Fiscal Years 2019-2023 CIP. Expenditures are focused on replacement, installation and/or abandonment of existing water mains, replacement of inoperable fire hydrants, rehabilitation of sewer systems, management of storm water with green infrastructure, upgrades to information technology systems, replacing aging equipment and vehicles, as well as rehabilitation of facilities that support the operation of the utility.



# Summary of CIP Financial Plan

The FY 2019 – FY 2023 capital improvement plan provides for \$259 million of water system improvements and \$199 million of sewer system improvements over the five year planning cycle.

| Category Summary      |             | FY 2018           | FY 2019           | FY 2020          | FY 2021          | FY 2022          | FY 2023          | Total 5-Year 2019-2023 |
|-----------------------|-------------|-------------------|-------------------|------------------|------------------|------------------|------------------|------------------------|
| Water Main            | 32%         | 44,700            | 34,493            | 20,128           | 29,150           | 28,000           | 34,000           | 145,771                |
| Sewer Line            |             |                   |                   |                  |                  |                  |                  |                        |
| Replacement           | 17%         | 20,000            | 20,000            | 20,000           | 16,000           | 10,000           | 10,000           | 76,000                 |
| CIPMO                 | 9%          | 45,000            | 14,468            | 13,391           | 8,280            | 5,590            | -                | 41,729                 |
| Green                 |             |                   |                   |                  |                  |                  |                  |                        |
| Infrastructure        | 14%         | 12,225            | 15,045            | 20,125           | 14,625           | 8,925            | 7,000            | 65,720                 |
| Central               |             |                   |                   |                  |                  |                  |                  |                        |
| Services              | 16%         | 10,750            | 29,989            | 11,500           | 11,000           | 11,000           | 11,000           | 74,489                 |
| Meters/ Fire          |             |                   |                   |                  |                  |                  |                  |                        |
| Hydrants              | 7%          | 6,000             | 7,283             | 6,000            | 6,000            | 6,000            | 6,000            | 31,283                 |
| O&M - I&E             | 5%          | -                 | 22,300            | 1,889            | -                | -                | -                | 24,189                 |
| <b>Total 2019 CIP</b> | <b>100%</b> | <b>\$ 138,675</b> | <b>\$ 143,578</b> | <b>\$ 93,033</b> | <b>\$ 85,055</b> | <b>\$ 69,515</b> | <b>\$ 68,000</b> | <b>\$ 459,181</b>      |
| WATER                 | 56%         | 78,575            | 86,304            | 40,463           | 44,790           | 42,295           | 45,500           | 259,352                |
| SEWER                 | 44%         | 60,100            | 57,274            | 52,570           | 40,265           | 27,220           | 22,500           | 199,829                |
|                       |             | 138,675           | 143,578           | 93,033           | 85,055           | 69,515           | 68,000           | 459,181                |

# CIP FY 2019 – Water System Summary



## Total est cost (1000's)

| Category                            | FY 2018 - Current Year | FY 2019       | FY 2020       | FY 2021       | FY 2022       | FY 2023       | 2019-2023 CIP Total | Total estimated cost |
|-------------------------------------|------------------------|---------------|---------------|---------------|---------------|---------------|---------------------|----------------------|
| <b>Water</b>                        |                        |               |               |               |               |               |                     |                      |
| Water Field Services                | \$ 44,700              | \$ 56,793     | \$ 22,017     | \$ 29,150     | \$ 28,000     | \$ 34,000     | \$ 169,960          | \$ 214,660           |
| Metering                            | 6,000                  | 7,283         | 6,000         | 6,000         | 6,000         | 6,000         | \$ 31,283           | \$ 37,283            |
| General Purpose                     | 22,500                 | 7,234         | 6,695         | 4,140         | 2,795         | -             | \$ 20,864           | \$ 43,364            |
| <b>Water Total</b>                  | <b>73,200</b>          | <b>71,309</b> | <b>34,713</b> | <b>39,290</b> | <b>36,795</b> | <b>40,000</b> | <b>222,107</b>      | <b>295,307</b>       |
| <b>Water Central Services</b>       |                        |               |               |               |               |               |                     |                      |
| Fleet                               | 2,000                  | 1,825         | 2,000         | 2,000         | 2,000         | 2,000         | \$ 9,825            | \$ 11,825            |
| Facilities                          | 2,500                  | 6,893         | 2,250         | 2,000         | 2,000         | 2,000         | \$ 15,143           | \$ 17,643            |
| Information Technology              | 875                    | 6,276         | 1,500         | 1,500         | 1,500         | 1,500         | \$ 12,276           | \$ 13,151            |
| <b>Water Central Services Total</b> | <b>5,375</b>           | <b>14,995</b> | <b>5,750</b>  | <b>5,500</b>  | <b>5,500</b>  | <b>5,500</b>  | <b>37,245</b>       | <b>42,620</b>        |
| <b>Grand Total</b>                  | <b>78,575</b>          | <b>86,304</b> | <b>40,463</b> | <b>44,790</b> | <b>42,295</b> | <b>45,500</b> | <b>259,352</b>      | <b>337,927</b>       |

# CIP FY 2019 – Sewer System Summary



## Total est cost (1000's)

| Category                            | FY 2018       | FY 2019       | FY 2020       | FY 2021       | FY 2022       | FY 2023       | 2019-2023 CIP Total | Total estimated cost |
|-------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------------|----------------------|
| <b>Sewer</b>                        |               |               |               |               |               |               |                     |                      |
| Field Services                      | \$ 20,000     | \$ 20,000     | \$ 20,000     | \$ 16,000     | \$ 10,000     | \$ 10,000     | \$ 76,000           | \$ 96,000            |
| Green Infrastructure                | 12,225        | 15,045        | 20,125        | 14,625        | 8,925         | 7,000         | \$ 65,720           | \$ 39,625            |
| Pump Stations                       | -             | -             | -             | -             | -             | -             | \$ -                | \$ -                 |
| General Purpose                     | 22,500        | 7,234         | 6,695         | 4,140         | 2,795         | -             | \$ 20,864           | \$ 43,364            |
| <b>Sewer Total</b>                  | <b>54,725</b> | <b>42,279</b> | <b>46,820</b> | <b>34,765</b> | <b>21,720</b> | <b>17,000</b> | <b>162,584</b>      | <b>178,989</b>       |
| <b>Sewer Central Services</b>       |               |               |               |               |               |               |                     |                      |
| Fleet                               | 2,000         | 1,825         | 2,000         | 2,000         | 2,000         | 2,000         | \$ 9,825            | \$ 11,825            |
| Facilities                          | 2,500         | 6,893         | 2,250         | 2,000         | 2,000         | 2,000         | \$ 15,143           | \$ 17,643            |
| Information Technology              | 875           | 6,276         | 1,500         | 1,500         | 1,500         | 1,500         | \$ 12,276           | \$ 13,151            |
| <b>Sewer Central Services Total</b> | <b>5,375</b>  | <b>14,995</b> | <b>5,750</b>  | <b>5,500</b>  | <b>5,500</b>  | <b>5,500</b>  | <b>37,245</b>       | <b>42,620</b>        |
| <b>Grand Total</b>                  | <b>60,100</b> | <b>57,274</b> | <b>52,570</b> | <b>40,265</b> | <b>27,220</b> | <b>22,500</b> | <b>199,829</b>      | <b>221,609</b>       |

# Thank You



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## **Audit Committee**

**Friday, March 16, 2018 at 8:00 a.m.**

5th Floor Board Room, Water Board Building  
735 Randolph Street, Detroit, Michigan 48226  
[GLWater.org](http://GLWater.org)

### **MEETING BINDER ADDENDUM**

- ✓ *Agenda Item # 8B - Monthly Revenue & Collections Report for January 2018 - Aging Update*
- ✓ *Agenda Item # 8D – Construction Work-in-Progress Report through September 30, 2017*
- ✓ *Agenda Item # 8F - CFO Update*



## Financial Services Audit Committee Communication

**Date:** March 16, 2018  
**To:** Great Lakes Water Authority Audit Committee  
**From:** Jon Wheatley, Public Finance Manager  
**Re:** Supplemental Analysis for Monthly Accounts Receivable Aging Report

**Background:** As part of this month's Wholesale Accounts Receivable Aging Report (and provided detail) included in the Revenues and Collection Report, there were several accounts with balances that require additional information.

**Analysis:** The analysis by customer category is shown below.

### Wholesale Water Customers

**City of Flint:** The '46 to 74 Days' outstanding balance of \$397,357.73 and the '75 to 104 Days' outstanding credit balance 92,970.46 were due to the unusual reporting of credits and charges on the aging. This was a result of the way BS&A was configured to apply Flint's prior credit balance and the new, Karegnondi Water Authority Debt Service credit. Their account has since been corrected to 'redistribute' those credits and this should not happen in the future.

### Industrial Waste Control (IWC) Customers

**Canton Township, Northville Township and Plymouth Township:** All three customers are a part of the Western Township Utilities Authority (WTUA) which had previously sent wastewater flows through the Rouge Valley system. Around July 1, 2017 WTUA began sending its wastewater flows to the Ypsilanti Township Utilities Authority (YCUA) including those related to industrial waste. GLWA's IWC department has been in contact with WTUA regarding the discontinuation of IWC services, however the one issue that remained was related to the physical changes made to the WTUA system to ensure no flows would enter the Rouge Valley system. This inquiry has since been satisfied and the last item to bring this to closure is the formal release of GLWA as the IWC regulator. GLWA's Office of the General Counsel has been notified. It is anticipated that these balances will be corrected once this action is complete.

### Pollutant Surcharge (PS) Customers

**Faygo Beverages, Inc.:** Faygo has a total balance due of \$177,251.40, of which, \$151,707.34 is 46 or more days outstanding. Faygo is a customer within the City of Detroit, but Faygo is billed directly for Pollutant Surcharge by GLWA. Because of the Agency relationship outlined in the Water and Sewer Services Agreement GLWA relies on the City of Detroit Water and Sewerage Department (DWSD) staff to follow up on customer accounts within the City of Detroit. It is GLWA's understanding that Faygo stopped paying their bills around December 2017 as part of a billing dispute. GLWA billing staff will follow up with DWSD billing staff to coordinate a response.

**General Linen Supply Co.:** General Linen has a total balance due of \$55,137.92 of which, \$43,019.81 is 46 or more days outstanding. Similar to Faygo, General Linen is a customer within the City of Detroit but is billed directly for Pollutant Surcharge by GLWA. It is GLWA's understanding that General Linen stopped paying their bills around December 2017 as part of a billing dispute. GLWA billing staff will follow up with DWSD billing staff to coordinate a response.

**Budget Impact:** The loss of the WTUA IWC customers will result in negative revenue variance of almost \$697,000 for FY 2018, based on the current IWC meter counts.

**Proposed Action:** Receive and file report.



## Financial Services Audit Committee Communication

**Date:** March 16, 2018

**To:** Great Lakes Water Authority Audit Committee

**From:** Andrew Sosnoski, Manager, Construction Accounting & Financial Reporting

**Re:** Construction Work-in-Progress Report through September 30, 2017

**Background:** The inaugural construction work-in-progress report (CWIP) for the Great Lakes Water Authority (GLWA) as of June 30, 2017 was issued on September 27, 2017. Since then, additional resources and business processes have been put in place for an expanded quarterly report. Attached is the first quarter report for FY 2018 as of September 30, 2017. Additions to this report include an accounting of how “allowances” and “programs” are drawn upon to support capital delivery at GLWA. This report also presents operational adjustments to the Capital Improvement Plan (CIP) utilizing a budget amendment feature in GLWA’s financial system. This will support accurate monthly cashflow projections for managing capital funds as well as refining planning data.

**Analysis:** Highlights from the attached report will be noted at the Audit Committee meeting. It should be noted that the second quarter FY 2018 report as of December 31, 2017 will be presented at the April 20, 2018 Audit Committee meeting.

**Proposed Action:** Receive and file report.



**Construction Work-in-Progress Quarterly Report  
(Unaudited, Pre-close)**

**As of September 30, 2017**

**For questions, please contact:**

**Andrew Sosnoski**

**Construction Accounting and Financial Reporting Manager**

**Phone: 313.999.2585**

**Email: [Andrew.Sosnoski@glwater.org](mailto:Andrew.Sosnoski@glwater.org)**

## **Table of Contents**

|   |           |
|---|-----------|
| <b>Introduction.....</b>  | <b>1</b>  |
| <b>Water system .....</b>   | <b>4</b>  |
| Percent of Spend Compared to Budget and Capital Improvement Plan (CIP) Requests.....      | 4         |
| Analysis of Projects with Largest Percent of Spend and Otherwise Noteworthy Projects..... | 5         |
| Construction Work-in-Progress Rollforward .....   | 18        |
| CIP Allowance and Program Summary .....   | 27        |
| Budget Amendment Reporting .....  | 34        |
| <b>Wastewater system .....</b>  | <b>40</b> |
| Percent of Spend Compared to Budget and Capital Improvement Plan (CIP) Requests.....      | 40        |
| Analysis of Projects with Largest Percent of Spend and Otherwise Noteworthy Projects..... | 41        |
| Construction Work-in-Progress Rollforward .....   | 51        |
| CIP Allowance and Program Summary .....   | 56        |
| Budget Amendment Reporting .....  | 60        |
| <b>Glossary of Acronyms .....</b>   | <b>61</b> |



**3/16/2018****To Our Stakeholders:**

The contents of this report represent the financial presentation of construction work-in-progress activity for the Great Lakes Water Authority (GLWA) as of September 30, 2017. The information in this report presents a snapshot to inform decision makers and stakeholders. This is important as we manage the capital program for the remainder of FY 2018 and approach the implementation of the FY 2019–2023 Capital Improvement Plan (CIP).

This report is relatively new and will continue to improve each quarter to inform decision makers and stakeholders. New to this report for this period are the following.

- Allowance & Program Analysis
- Budget Amendments
- Coordination of Phase Reporting within the Capital Improvement Program (CIP) & Construction Work-In-Progress (CWIP) Reporting Documents

**Report Contents and Organization**

This report is divided into two sections: one for the Water System and one for the Wastewater System as identified in the table of contents. Each section includes analysis and reporting of the following:

*Percent of Spend Compared to Budget and Capital Improvement Plan Requests:* Presentation of spend information is necessary to report our progress on CIP projects.

*Analysis of Projects with Largest Percent of Spend and Otherwise Noteworthy Projects:* A combination of commentary and analysis provides further insight into risk factors and project status. An excerpt from the CIP for each of the selected projects follows the commentary as further background information.

*Construction Work-in-Progress Rollforward:* This table provides a list of all projects in the CIP along with status or financial activity. This table may be used to revisit priorities, workload, and phasing.

*Budget Amendments / Allowance & Program Analysis:* This information identifies the specific usage and the reallocation of allowance and program budgets to CIP projects

## **Financial Information**

All project amounts are unaudited and are “pre-close”. This means that direct contractor costs are generally included in these totals with most pay estimates entered through September 30, 2017. There may, however, be some pay estimates that lag. The totals do not include indirect overhead or capitalized interest.

## **Future Enhancements**

This report presents information that is readily available. Currently under development are enhancements that will provide the opportunity for improved CWIP reporting.

*Monthly Capital Spend Projections* - Improvements are underway related to preliminary monthly spend information, projected out for the duration of the CIP, and communicated with Treasury to allow for investment optimization. This reporting is being developed as a joint effort with our engineering partners. This will also allow for improved accuracy of our Key Performance Indicator on rate of spending.

*Direct Labor Capitalization* – Technology solutions are being evaluated to improve direct labor capture accuracy, timeliness and ease in which labor cost are captured.

*Indirect Labor Capitalization* - Presently an effort to identify indirect labor related to the capital process is underway.

*Alignment of Budget & CIP* – During the development of the FY 2019–2023 CIP Plan, FY 2018 budgeted CIP was reforecast to align with anticipated spend. The resulting budget amendments will be entered and reflected in future period CWIP reports.

*Key Performance Indicators* – KPI's under consideration include CIP spend vs book value assets, percentage growth of project in amount and duration, actual vs planned number of projects completed, and actual vs planned monthly capital spend.

## WATER SYSTEM

### Percent of Spend Compared to Annual Budget and Capital Improvement Plan (CIP) Requests

The rate of spend of is a key performance indicator. The ratios for FY 2017 (twelve months) of 37.9% and for FY 2018 (three months) of 16.2% are lower than simple benchmark of 80% and 25% respectively. This is attributable to three reasons. First, competition for staff priorities during stand-up of the GLWA (primarily during FY 2017). Second, is the alignment of projects identified and staff or contractor resources to carry out the projects. Several key hires occurred during the past year which will improve this performance. Third, is the phasing of CIP activity which is being further refined throughout GLWA.

|  | FY 2017 Original<br>Plan and Budget<br>(Twelve Months) | FY 2017<br>(Unaudited),<br>Activity | FY 2017 (Unaudited),<br>Activity as a Percent<br>of Budget | FY 2018<br>Amended<br>Budget | FY 2018 Prorated<br>(Three Months) | FY 2018<br>(Unaudited), Pre-<br>Close Activity<br>(Three Months) | FY 2018 (Unaudited), Pre-<br>Close Activity as a Percent<br>of Prorated Budget<br>(Three Months) |
|--|--|-------------------------------------|--|------------------------------|------------------------------------|--|--|
| <b>Water System Projects</b>                           |  |                                     |  |                              |                                    |  |  |
| <b>FY 2017 CIP Project Requests @ 100%</b>             | <b>\$ 130,232,000</b>                                  |                                     |  |                              |                                    |  |  |
| <b>FY 2017 CIP Net Budget (approx. 80% of request)</b> | <b>104,185,600</b>                                     | <b>\$ 39,483,833</b>                | <b>37.9%</b>   |                              |                                    |  |  |
| <b>FY 2018 CIP Project Requests @ 100%</b>             |  |                                     |  | <b>\$ 137,655,000</b>        | <b>\$ 34,413,750</b>               |  |  |
| <b>FY 2018 CIP Net Budget (approx. 80% of request)</b> |  |                                     |  | <b>110,124,000</b>           | <b>27,531,000</b>                  | <b>\$ 4,455,413</b>  | <b>16.2%</b>   |

It should be noted that these interim reports have been prepared on a modified cash basis. This means that expenses may lag in vendor invoice receipt and posting. Known expenses, material in nature, have been accrued.

## Analysis of Projects with Largest Percent of Spend and Otherwise Noteworthy Projects

Of the total Water System Construction Bond spend for FY 2018 to date, **six projects account for \$3.1 million or 68.8% of the total spend.** Those projects are summarized in the following table. An analysis of each project and its related CIP summary follow the table. Note that the last page of this report provides a Glossary of Acronyms.

| Water System Projects  | Total Project<br>Budget per CIP<br>(Life of Projects) | Life-to-Date Through<br>June 30, 2017<br>(Unaudited) | FY 2018 Requested<br>Budget Per CIP | FY 2018 (Unaudited),<br>Pre-Close Activity<br>(Three Months) | FY 2018 (Unaudited),<br>Pre-Close Activity as a<br>Percent of Total Water<br>Actual Expenses<br>(Three Months) |
|--|---|--|-------------------------------------|--|--|
| <b>Project 114001-Oversight SPW 1958 Filter Rehabilitation</b>             | \$ 77,422,000   | \$ 82,884,422  | \$ 1,200,000                        | \$ 1,998,734   | <b>44.9%</b>   |
| <b>Project 114015-Emergency Grating Replacement at<br/>Springwells WTP</b> | 2,500,000   | \$ 253,623   | 2,000,000                           | 543,248  | <b>12.2%</b>   |
| <b>Project 122012-36-Inch Water Main in Telegraph Road</b>                 | 7,061,000   | \$ 8,125,683   | 5,061,000                           | 309,905  | <b>7.0%</b>  |
| <b>Project 122014-Romulus 48-Inch Water Main Installation</b>              | 4,535,000   | \$ 3,839,433   | -                                   | 99,109   | <b>2.2%</b>  |
| <b>Project 122015-30-Inch Water Main Replacement</b>                       | 2,327,000   | \$ 2,345,314   | -                                   | 115,459  | <b>2.6%</b>  |
| <b>Project 170401-Emergency bypass around Ypsilanti Station</b>            | 1,150,000   | 373,858  | -                                   | 461  | <b>0.0%</b>  |
| <b>Selected Projects as a Percentage of the Total</b>                      | <u>\$ 94,995,000</u>                                  | <u>\$ 97,822,332</u>                                 | <u>\$ 8,261,000</u>                 | <u>\$ 3,066,916</u>  | <u><b>68.8%</b></u>  |
| <b>Total</b>   |   |  | <u><b>\$ 137,655,000</b></u>        | <u><b>\$ 4,455,413</b></u>                                   | <u><b>100.0%</b></u>   |

The following analysis provides brief highlights related to these projects.

**Project 114001 – Springwells Water Treatment Plant 1958 Filter Rehabilitation**

| Water System Projects | Total Project<br>Budget per CIP<br>(Life of Projects) | Life-to-Date Through<br>June 30, 2017<br>(Unaudited) | FY 2018 Requested<br>Budget Per CIP | FY 2018 (Unaudited),<br>Pre-Close Activity<br>(Three Months) | FY 2018 (Unaudited),<br>Pre-Close Activity as a<br>Percent of Total Water<br>Actual Expenses |  |
|-----------------------|---|--|-------------------------------------|--|--|--|
|                       |   |  |                                     |  | (Three Months)   |  |

|  |    |            |    |            |    |           |    |           |              |
|--|----|------------|----|------------|----|-----------|----|-----------|--------------|
| <b>Project 114001-Oversight SPW 1958 Filter Rehabilitation</b> | \$ | 77,422,000 | \$ | 82,884,422 | \$ | 1,200,000 | \$ | 1,998,734 | <b>44.9%</b> |
|--|----|------------|----|------------|----|-----------|----|-----------|--------------|

**Project Manager:** Eric Kramp

**Total Design Fees (previously budgeted elsewhere):** \$6,500,000

**Total Construction and Construction Assistance Budget:** \$77,422,000

**Timeline:** To be completed by November 2018

**FY 2018 Last Pay Estimate Processed:** September 30, 2017

**Key Contracts/Vendors:** SP-563 Walsh Construction; CS-1425 & CS-200 CDM Michigan

**Project Description:** Installation of new filter media, underdrains, filter valves and rate controllers; replace the existing filter control console and hydraulic controls at Springwells Water Treatment Plant (WTP).

**Purpose:** Rehabilitation of both filter trains to restore filtration capacity and sustain the useful service life of the process treatment infrastructure.

**Status:** Project timeline has been extended to include additional scope. Billing is complete through September 30, 2017.

**Additional Project Manager Comments:** Contract SP-563 will complete on or before revised final completion date of November 12, 2018. Contract Change Directive No. 8 is currently in process and under review by GLWA Procurement Owner's Representative. Project is expected to complete under budget and on time as specified in Change Order No. 1. Substantial completion of the process related work is expected on or before May 16, 2018. A subcontractor of the general contractor suffered a fatality on the site during start up activities. The mechanical contractor was removed from the site and the general contractor did a complete review of their health and safety procedures. GLWA is working with the contractor and consultant to ensure the project is completed safely, on time and on budget.



**(Project 114001 Continued)**

**Additional Construction Accounting & Financial Reporting Team Comments:** Total project budget per the Board approved CIP schedule does not include the historical, pre-fiscal year 2017 budget for the design contract CS-1425 nor the Carve out of the Water Treatment Plant Allowance to fund CS-200 the Owner's Representative (RPR) consultant contract. The design contract has a total budget amount of \$6,500,000.

**FY 2018-2022 CIP Page VI-3 for Project 114001 – Springwells Water Treatment Plant 1958 Filter Rehabilitation**

**CIP Number:** **CIP 917**

**Title:** **SPRINGWELLS WATER TREATMENT PLANT 1958 FILTER REHABILITATION AND AUXILIARY FACILITIES**

**Classification:** 114: Water > Treatment Plants & Facilities > Springwells

**Managing Dept:** Water Eng

**RC Score:** NA

**Contract No.:** CS-1425, SP-563

**Significance:** Rehabilitation of Springwells WTP 1958 Filters and 1930s failed filters to provide the WTP with a renovated capacity of 295 MGD

**Location:** Springwells WTP

**Driver:** N/A - Active

**Explanation:** N/A - Active

**Preliminary Scope of Work:**

This project includes the study, design (CS-1425) and construction assistance of improvements to the Springwells WTP that includes the replacement of Phosphoric Acid Feed System, rehabilitation of the 1958 Filters, rehabilitation of failed 1930s Filters, Update of Operation and Maintenance Manuals, and addition of polymer systems and controls. Provide construction services to furnish and install new filter media, underdrains, filter valves, and rate controllers; replace the existing filter control consoles, hydraulic control valves with electric control valves, enclosures; add appurtenances to enable automatic backwashing of the filters; provide a Filter Aid Polymer System to the 1930 and 1958 filter complexes; Programmable Logic Controller-based controls for automatic control of the polymer system; install a local instrumentation and controls system.

**Challenges:** N/A - Active

**Initial Project Cost Estimates (in \$1000s)**

| Phase   | Status | Start Date | End Date  | Lifetime Actual Thru FY2016 (Unaudited) | Projected Expenditures FY2017 | Projected Expenditures FY2018 | Projected Expenditures FY2019 | Projected Expenditures FY2020 | Projected Expenditures FY2021 | Projected Expenditures FY2022 | Projected Expenditures FY2023 & Beyond | 2018-2022 CIP Total | Phase Total |
|---------|--------|------------|-----------|---|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|--|---------------------|-------------|
| S/D/C A | Active | 1/18/2008  | 1/18/2018 | \$0                                     | \$353                         | \$95                          | \$0                           | \$0                           | \$0                           | \$0                           | \$0                                    | \$95                | \$448       |
| C       | Active | 7/8/2013   | 3/14/2018 | \$56759                                 | \$20000                       | \$215                         | \$0                           | \$0                           | \$0                           | \$0                           | \$0                                    | \$215               | \$76974     |
| Totals  |        |            |           | \$56759                                 | \$20353                       | \$310                         | \$0                           | \$0                           | \$0                           | \$0                           | \$0                                    | \$310               | \$77422     |



Springwells filter building

\*Budget Amendment 6094 for RPR Services increases planned CIP from \$310,000 to \$1,200,000

**Project 114015 – Emergency Grating Replacement at Springwells WTP**

| Water System Projects  | Total Project<br>Budget per CIP<br>(Life of Projects) | Life-to-Date Through<br>June 30, 2017<br>(Unaudited) | FY 2018 Requested<br>Budget Per CIP | FY 2018 (Unaudited),<br>Pre-Close Activity<br>(Three Months) | FY 2018 (Unaudited),<br>Pre-Close Activity as a<br>Percent of Total Water |
|--|---|--|-------------------------------------|--|---|
|  |   |  |                                     |  | Actual Expenses<br>(Three Months)   |
| <b>Project 114015-Emergency Grating Replacement at Springwells WTP</b> | 2,500,000   | \$ 253,623   | 2,000,000                           | 543,248  | <b>12.2%</b>  |

**Project Manager:** Erich Klun

**Total Construction Budget:** \$2,500,000

**Timeline:** To be completed by May 1, 2018

**FY 2018 Last Pay Estimate Processed:** September, 2017

**Key Contracts/Vendors:** SCP-DB-112 Barton Malow Company

**Project Description:** This project was initiated resulting from an emergency, a FY 2017 budget amendment funded this project from the Water Treatment Plant Allowance – 170100. Work includes demolition, removal, disposal and replacement of existing structural steel and grating that provides access to critical areas of Springwells. Condition of the structural steel and grating created safety issues for those working in the lower level of the Low Lift Station. Collapse of the structural steel posed the risk of flooding the Low Lift Station and interrupting Springwells production.

**Purpose:** Replace original 1930s-vintage deteriorated structural steel and grating posing safety concerns to operators.

**Status:** Project is on schedule with an anticipated completion date of May 1, 2018.

**Additional Project Manager Comments:** None.

**Additional Construction Accounting & Financial Reporting Team Comments:** Billing is current and project is on budget.

**FY 2018-2022 CIP Page VI-71 for Project 114015 – Emergency Grating Replacement at Springwells**

**CIP Number:** CIP 1412

**Title:** EMERGENCY GRATING REPLACEMENT AT SPRINGWELLS WTP

**Classification:** 114: Water > Treatment Plants & Facilities > Springwells

**Managing Dept:** WSO Engineering

**RC Score:** NA

**Contract No.:** NA

**Significance:** Original grating and supporting structural steel dating back to 1930 has deteriorated to the point where operator, consultant and contractor safety at Springwells is severely compromised. Additionally, structural failure could result in lost water production at Springwells.

**Location:** Springwells Water Treatment Plant

**Driver:** 1 – Condition

**Explanation:** Failure of structural components could injure personnel and/or take Springwells out of commission

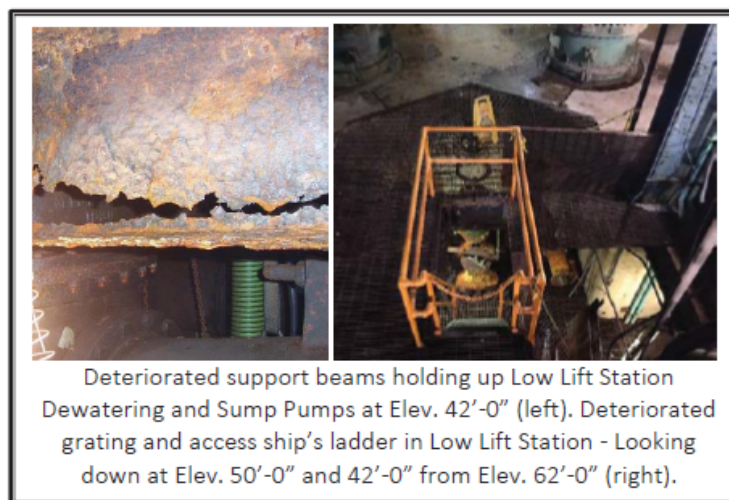
**Preliminary Scope of Work:**

Refer to the RFP and proposals received. The scope is very well defined, and the winning proposal is very well authored. It involves a lot of demolition and replacement of deteriorated grating and structural steel at five (5) locations at Springwells, the bulk of which is in the Low Lift Station.

**Challenges:** Maintaining operations through execution of the work.

**Initial Project Cost Estimates (in \$1000s)**

| Phase  | Status | Start Date | End Date | Lifetime Actual Thru FY2016 (Unaudited) | Projected Expenditures FY2017 | Projected Expenditures FY2018 | Projected Expenditures FY2019 | Projected Expenditures FY2020 | Projected Expenditures FY2021 | Projected Expenditures FY2022 | Projected Expenditures FY2023 & Beyond | 2018-2022 CIP Total | Phase Total |
|--------|--------|------------|----------|---|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|--|---------------------|-------------|
| D      | New    | NA         | NA       | \$0                                     | \$250                         | \$250                         | \$0                           | \$0                           | \$0                           | \$0                           | \$0                                    | \$250               | \$500       |
| C      | New    | NA         | NA       | \$0                                     | \$250                         | \$1750                        | \$0                           | \$0                           | \$0                           | \$0                           | \$0                                    | \$1750              | \$2000      |
| Totals |        |            |          | \$0                                     | \$500                         | \$2000                        | \$0                           | \$0                           | \$0                           | \$0                           | \$0                                    | \$2000              | \$2500      |



**Project 122012-36-Inch Water Main in Telegraph Road**

| Water System Projects                                      | Total Project<br>Budget per CIP<br>(Life of Projects) | Life-to-Date Through<br>June 30, 2017<br>(Unaudited) | FY 2018 Requested<br>Budget Per CIP | FY 2018 (Unaudited),<br>Pre-Close Activity<br>(Three Months) | FY 2018 (Unaudited),<br>Pre-Close Activity as a<br>Percent of Total Water |
|--|---|--|-------------------------------------|--|---|
|  |   |  |                                     |  | Actual Expenses<br>(Three Months)   |
| <b>Project 122012-36-Inch Water Main in Telegraph Road</b> | 7,061,000   | \$ 8,125,683   | 5,061,000                           | 309,905  | <b>7.0%</b>   |

**Project Manager:** Eric Kramp

**Total Construction Budget:** \$7,061,000

**Timeline:** To be completed by December 2019

**FY 2018 Last Pay Estimate Processed:** November 28, 2017

**Key Contracts/Vendors:** WS-684A Ric-Man Detroit, Inc.

**Project Description:** Replacement of 36-Inch water main on Telegraph Road between Cherry Hill and Warren Avenue.

**Purpose:** Replacement of pipelines that have a history of frequent breaks and high maintenance costs.

**Status:** Project was delayed three months due to issues with flow stoppage. Billing is current. Project Manager drafting a change order to extend time to complete contract.

**Additional Project Manager Comments:** Project is waiting for high-demand season to complete final walk-through and high-pressure testing schedule for April 2018. Contract will stay open until December 2019 due to requirements for landscape maintenance mandated by MDOT.

**Additional Construction Accounting & Financial Reporting Team Comments:** Original CIP Budget does not include budget the design fee completed as a task under As Needed Engineering Services contract CS-1488. Additionally the Life-to-Date Through June 30, 2017 includes capitalized interest, wage and benefit costs not included in the original CIP budget.

**FY 2018-2022 CIP Page VI-67 for Project 122012-36-Inch Water Main in Telegraph Road**

**CIP Number:** CIP 1404

**Title:** 36-INCH WATER MAIN IN TELEGRAPH ROAD

**Classification:** 122: Water > Field Services > Transmission System

**Managing Dept:** Unavailable

**RC Score:** NA

**Contract No.:** WS-684A

**Significance:** Excessive joint leaks warrant replacement; new water line to be placed in greenbelt

**Location:** Telegraph Rd, Cherry Hill to Warren Ave

**Driver:** N/A - Active

**Explanation:** N/A - Active

**Preliminary Scope of Work:**

This project includes installation of approximately 10,530 feet of 36-inch dia. water main in Telegraph Road from Cherry Hill to Warren Ave.

**Challenges:** N/A - Active

**Initial Project Cost Estimates (in \$1000s)**

| Phase  | Status             | Start Date | End Date  | Lifetime<br>Actual Thru<br>FY2016<br>(Unaudited) | Projected<br>Expenditures<br>FY2017 | Projected<br>Expenditures<br>FY2018 | Projected<br>Expenditures<br>FY2019 | Projected<br>Expenditures<br>FY2020 | Projected<br>Expenditures<br>FY2021 | Projected<br>Expenditures<br>FY2022 | Projected<br>Expenditures<br>FY2023 &<br>Beyond | 2018-2022<br>CIP Total | Phase Total |
|--------|--------------------|------------|-----------|--|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|---|------------------------|-------------|
| C      | Not Yet<br>Started | 11/12/2013 | 6/19/2016 | \$0  | \$2000                              | \$5061                              | \$0                                 | \$0                                 | \$0                                 | \$0                                 | \$0   | \$5061                 | \$7061      |
| Totals |                    |            |           | \$0  | \$2000                              | \$5061                              | \$0                                 | \$0                                 | \$0                                 | \$0                                 | \$0   | \$5061                 | \$7061      |





### Project 122014-Romulus 48-Inch Water Main Installation

| Water System Projects | Total Project<br>Budget per CIP<br>(Life of Projects) | Life-to-Date Through<br>June 30, 2017<br>(Unaudited) | FY 2018 Requested<br>Budget Per CIP | FY 2018 (Unaudited),<br>Pre-Close Activity<br>(Three Months) | FY 2018 (Unaudited),<br>Pre-Close Activity as a<br>Percent of Total Water |
|-----------------------|---|--|-------------------------------------|--|---|
|                       |   |  |                                     |  | Actual Expenses<br>(Three Months)   |

|  |           |    |           |   |        |      |
|--|-----------|----|-----------|---|--------|------|
| Project 122014-Romulus 48-Inch Water Main Installation | 4,535,000 | \$ | 3,839,433 | - | 99,109 | 2.2% |
|--|-----------|----|-----------|---|--------|------|

**Project Manager:** Khader Hamad

**Total Budget:** \$4,535,000

**Timeline:** To be completed in Fall 2017

**FY 2018 Last Pay Estimate Processed:** October 9, 2017

**Key Contracts/Vendors:** MOU-4848 City of Romulus

**Project Description:** Installation of 4,000 feet of 48-Inch water main west from the intersection of Vining and Wick Roads.

**Purpose:** Coordination of system improvements with road work to accommodate a retail development within the City of Romulus.

**Status:** Project delayed by development. Project is on budget and billing is complete through October 9, 2017.

**Additional Project Manager Comments:** Project is complete and pending close-out.

**Additional Construction Accounting & Financial Reporting Team Comments:** GLWA received a recognition award on the project as the 2017 Project of the Year from the American Public Works Association (APWA) Downriver Branch. This project is an example of collaboration and scheduling between GLWA and its customer community, the City of Romulus allowing for successful completion. There is no budget for FY 2018 since expenses were expected to be completed by June 30, 2017. The project is pending close out and no budget amendment will be processed.

**FY 2018-2022 CIP Page VI-13 for Project 122014-Romulus 48-Inch Water Main Installation**

**CIP Number:** CIP 1230B

**Title:** 48-INCH WATER MAIN INSTALLATION AT VINING AND WICK ROADS IN ROMULUS

**Classification:** 122: Water > Field Services > Transmission System

**Managing Dept:** Unavailable

**RC Score:** NA

**Contract No.:** MOU-4848

**Significance:** Placement of a parallel water main to minimize service disruptions to customer communities

**Location:** Wick Rd near Vining Rd in Romulus

**Driver:** N/A - Active

**Explanation:** N/A - Active

**Preliminary Scope of Work:**

The City of Romulus notified DWSD of a significant retail development opening in Autumn 2016 at the southeast corner of Vining and Wick Roads. Romulus was also aware that DWSD has a project pending to place a 48" water main along Wick Road. Placement of the new 48" water main would be disruptive to the retail development traffic entrances/exits facing Wick road. Thus, Romulus asked if the 48" water main project could be expedited so it could be in place at the time of the retail development construction in Spring/Summer 2016. The 48" water main will be placed by Romulus as a part of the pavement upgrade work being pursued by Romulus early in 2016.

**Challenges:** N/A - Active

**Initial Project Cost Estimates (in \$1000s)**

| Phase  | Status | Start Date | End Date | Lifetime Actual Thru FY2016 (Unaudited) | Projected Expenditures FY2017 | Projected Expenditures FY2018 | Projected Expenditures FY2019 | Projected Expenditures FY2020 | Projected Expenditures FY2021 | Projected Expenditures FY2022 | Projected Expenditures FY2023 & Beyond | 2018-2022 CIP Total | Phase Total |
|--------|--------|------------|----------|---|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|--|---------------------|-------------|
| C      | Active | 3/7/2016   | TBD      | \$1021                                  | \$3514                        | \$0                           | \$0                           | \$0                           | \$0                           | \$0                           | \$0                                    | \$0                 | \$4535      |
| Totals |        |            |          | \$1021                                  | \$3514                        | \$0                           | \$0                           | \$0                           | \$0                           | \$0                           | \$0                                    | \$0                 | \$4535      |



Pipe ready to install

**Project 122015-30-Inch Water Main Replacement**

| Water System Projects                                | Total Project<br>Budget per CIP<br>(Life of Projects) | Life-to-Date Through<br>June 30, 2017<br>(Unaudited) | FY 2018 Requested<br>Budget Per CIP | FY 2018 (Unaudited),<br>Pre-Close Activity<br>(Three Months) | FY 2018 (Unaudited),<br>Pre-Close Activity as a<br>Percent of Total Water |
|--|---|--|-------------------------------------|--|---|
|  |   |  |                                     |  | Actual Expenses<br>(Three Months)   |
| <b>Project 122015-30-Inch Water Main Replacement</b> | 2,327,000   | \$ 2,345,314   | -                                   | 115,459  | <b>2.6%</b>   |

**Project Manager:** Khader Hamad

**Total Budget:** \$2,327,000

**Timeline:** To be completed by Fall 2017

**FY 2018 Last Pay Estimate Processed:** January 8, 2018

**Key Contracts/Vendors:** CON-105 Lakeshore Global Corporation

**Project Description:** Installation of 30-Inch water main under the Jefferson bridge in River Rouge.

**Purpose:** Replace the 30-Inch cast iron main installed in 1923 that has a portion under the Rouge River that is damaged and leaking.

**Status:** Project is complete and waiting on submittals and close-out documents from the project manager. Project is on budget and billing is complete and paid out inclusive of retainage.

**Additional Project Manager Comments:** None.

**Additional Construction Accounting & Financial Reporting Team Comments:** Project is complete and pending close-out for capitalization. There is no budget for FY 2018 since original plan spend was expected to be complete by June 30, 2017. No budget amendment will be made for project.

**FY 2018-2022 CIP Page VI-13 for Project 122015-30-Inch Water Main Replacement**

**CIP Number:** CIP 1230c

**Title:** 30-INCH WATERMAIN

**Classification:** 122: Water > Field Services > Transmission System

**Managing Dept:** Unavailable

**RC Score:** NA

**Contract No.:** CON-105

**Significance:** Unavailable

**Location:** Not provided.

**Driver:** N/A

**Explanation:** Not provided.

**Preliminary Scope of Work:**

Not provided.

**Challenges:** N/A

**Initial Project Cost Estimates (in \$1000s)**



| Phase  | Status | Start Date | End Date | Lifetime<br>Actual Thru<br>FY2016<br>(Unaudited) | Projected<br>Expenditures<br>FY2017 | Projected<br>Expenditures<br>FY2018 | Projected<br>Expenditures<br>FY2019 | Projected<br>Expenditures<br>FY2020 | Projected<br>Expenditures<br>FY2021 | Projected<br>Expenditures<br>FY2022 | Projected<br>Expenditures<br>FY2023 &<br>Beyond | 2018-2022<br>CIP Total | Phase Total |
|--------|--------|------------|----------|--|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|---|------------------------|-------------|
| C      | New    | NA         | NA       | \$0  | \$2327                              | \$0                                 | \$0                                 | \$0                                 | \$0                                 | \$0                                 | \$0   | \$0                    | \$2327      |
| Totals |        |            |          | \$0  | \$2327                              | \$0                                 | \$0                                 | \$0                                 | \$0                                 | \$0                                 | \$0   | \$0                    | \$2327      |

## Another Noteworthy Water System Project

### Project 170401-Emergency bypass around Ypsilanti Station

| Water System Projects                                    | Total Project<br>Budget per CIP<br>(Life of Projects) | Life-to-Date Through<br>June 30, 2017<br>(Unaudited) | FY 2018 Requested<br>Budget Per CIP | FY 2018 (Unaudited),<br>Pre-Close Activity<br>(Three Months) | FY 2018 (Unaudited),<br>Pre-Close Activity as a<br>Percent of Total Water<br>Actual Expenses<br>(Three Months) |
|--|---|--|-------------------------------------|--|--|
| Project 170401-Emergency bypass around Ypsilanti Station | 1,150,000   | 373,858  | -                                   | 461  | 0.0%   |

**Project Manager:** Eric Kramp

**Total Budget:** \$1,150,000

**Timeline:** In negotiations for early termination (GLWA initiated)

**FY 2018 Last Pay Estimate Processed:** 01/27/2017

**Key Contracts/Vendors:** SCP-DWS-018 Z Contractors

**Project Description:** Construction of a new bypass around Ypsilanti Station, joining the Ypsilanti Station Discharge to the Joy Road section. A FY 2017 budget amendment funded this project from the Water Transmission Improvement Program – 170400

**Purpose:** The project is to bypass a broken valve that is not easily accessible and costly to replace.

**Status:** Project was delayed significantly by easement issues. Project on hold pending early termination.

**Additional Project Manager Comments:** GLWA is in the process of negotiating an early termination of the project without prejudice to the vendor. Due to ground water contamination site-specific issues at the station, repairing or replacing the malfunctioning gate valve requires too large a shutdown to be viable. Project needs to be redesigned to address zero ground water infiltration issues. Work completed to date on project will be able to be reused on the new design.

## Construction Work-in-Progress Rollforward

The purpose of the construction work-in-progress (CWIP) rollforward is to analyze the current year activity for each project in relation to the overall capital improvement program as well as the project portfolio overall.

The CWIP Rollforward provides a project status for each item.

Future Year: Project that was included in the CIP with no expenditures (F)

Active: Project in which procurement process has been initiated and expenditures incurred (A)

Pending Close: Project that has no projected expenditures for the current fiscal year and has reached substantial completion (PC)

Closed: Project that has been closed and capitalized (C)

Projects in bold font on the CWIP Rollforward were discussed in further detail previously in this report.

As shown in the summary below, the Water System CWIP Rollforward for FY 2018-2022 identifies 109 projects with a total value of \$1.17 billion. Of that total, \$163.5 million (pre-close, unaudited) is in CWIP as of September 30, 2017 as shown in the table beginning on the next page.

The order of the report on the subsequent pages is from largest spend in FY 2018 dollars first.

| Status                      | Project Count | Total Project Cost      | Percent of Total |
|-----------------------------|---------------|-------------------------|------------------|
| Future Years (Post FY 2018) | 27            | \$ 161,535,000          | 14%              |
| Active                      | 71            | 960,266,000             | 82%              |
| Pending Closeout            | 8             | 45,537,000              | 4%               |
| Closed                      | 3             | 2,041,000               | 0%               |
| <b>Grand Total</b>          | <b>109</b>    | <b>\$ 1,169,379,000</b> | <b>100%</b>      |



# Water System Construction Work-in-Progress Quarterly Report

As of September 30, 2017

Great Lakes Water Authority  
Water System Construction Work-in-Progress (CWIP) FY 2018 Rollforward  
Unaudited, Pre-Close Activity For the Quarter Ended September 30, 2017

|        |   |        |                                 |                                       | FY 2018 Activity (Unaudited)   |   |                               |                         |  |  |                                       |   |   |
|--------|---|--------|---------------------------------|---------------------------------------|--------------------------------|---|-------------------------------|-------------------------|--|--|---------------------------------------|---|---|
|        |   |        | Total Project Estimate from CIP | CWIP Balance July 1, 2017 (Unaudited) | Construction: xx-xxxx (616900) | Contractual Engineering Services (617950) | Capitalized Interest (703115) | Other Expenses (617900) | Capital Allocation: Non-Personnel (601998) | Capital Allocation: Personnel (601995) | Capital Allocation: Benefits (601997) | FY 2018 Activity (Unaudited), Pre-Close | Unaudited, Pre-Close CWIP Balance, September 30, 2017 |
| CIP #  | Brief Description   | Status |                                 |                                       |                                |   |                               |                         |  |  |                                       |   |   |
| 114001 | Project 114001-Springwells Water Treatment Plant 1958 Filter Rehabilitation and Auxiliary Facilities            | A      | \$ 78,312,000                   | \$ 82,884,422                         | \$ 1,715,378                   | \$ 223,968                                |                               |                         | \$ 37,256                                  | \$ 15,951                              | \$ 6,180                              | 1,998,734                               | \$ 84,876,975   |
| 114015 | Project 114015-Emergency Grating Replacement at Springwells WTP   | A      | 2,500,000                       | 253,623                               | 531,981                        |   |                               |                         |  | 11,048                                 | 219                                   | 543,248                                 | 796,652   |
| 122012 | Project 122012-36-inch Water Main in Telegraph Road   | A      | 7,061,000                       | 8,125,683                             | 309,675                        |   |                               |                         |  | 165                                    | 66                                    | 309,905                                 | 8,435,522   |
| 170107 | Project 170107- Belle Isle Water Supply Intake Lagoon Main Entrance   | A      | 358,500                         | 12,041                                | 208,292                        | 13,310                                    |                               |                         |  | 3,732                                  | 1,493                                 | 226,827                                 | 237,375   |
| 122004 | Project 122004-96-inch Main Relocation, Isolation Valves Installations, and New Parallel Main                   | A      | 139,000,000                     | 459,919                               |                                | 154,364                                   |                               |                         |  | 9,652                                  | 2,761                                 | 166,777                                 | 623,935   |
| 114003 | Project 114003-Water Production Flow Metering Improvements at NE, SW, and SPW WTP                               | A      | 12,900,000                      | 184,952                               | 138,690                        |   |                               |                         |  | 1,106                                  | 292                                   | 140,088                                 | 324,748   |
| 111006 | Project 111006-Replacement of Filter Instrumentation and Raw Water Flow Metering Improvements at Lake Huron WTP | A      | 24,630,000                      | 253,138                               | -                              | 116,415                                   | -                             | -                       | -  | -                                      | -                                     | 116,415                                 | 369,553   |
| 122015 | Project 122015-30-Inch Water Main   | PC     | 2,327,000                       | 2,345,314                             | 115,459                        |   |                               |                         |  |  |                                       | 115,459                                 | 2,460,774   |
| 122014 | Project 122014-48-Inch Water Main Installation at Vining and Wick Roads in Romulus                              | A      | 4,535,000                       | 3,839,433                             | 99,109                         |   |                               |                         |  |  |                                       | 99,109                                  | 3,938,541   |
| 115001 | Project 115001-Yard Piping, Valves and Venturi Meters Replacement at Water Works Park                           | A      | 53,900,000                      | 8,977                                 |                                | 92,391                                    |                               |                         |  | 1,750                                  | 700                                   | 94,841                                  | 103,117   |
| 132008 | Project 132008-Needs Assessment Study for all Water Booster Pumping Stations                                    | A      | 1,700,000                       | 33,385                                |                                | 79,167                                    |                               |                         |  | 15,038                                 | 215                                   | 94,421                                  | 127,591   |
| 170103 | Project 17103-Belle Isle Water Supply Intake and Ice Boom Improvements  | A      | 369,150                         | 6,243                                 | 72,703                         |   |                               |                         |  |  |                                       | 72,703                                  | 78,946  |
| 114009 | Project 114009-Springwells Water Treatment Plant Service Area Redundancy Study                                  | A      | 450,000                         | 193,332                               |                                | 67,967                                    |                               |                         |  | 1,094                                  | 438                                   | 69,499                                  | 262,393   |
| 114013 | Project 114013-Springwells Reservoir Fill Line Improvements   | A      | 7,914,000                       | 119,663                               |                                | 51,411                                    |                               |                         |  | 4,554                                  | 122                                   | 56,086                                  | 175,628   |

# Water System

## Construction Work-in-Progress Quarterly Report

As of September 30, 2017

Great Lakes Water Authority  
Water System Construction Work-in-Progress (CWIP) FY 2018 Rollforward  
Unaudited, Pre-Close Activity For the Quarter Ended September 30, 2017

| CIP #  | Brief Description  | Status | Total Project Estimate from CIP | CWIP Balance July 1, 2017 (Unaudited) | FY 2018 Activity (Unaudited)   |   |                               |                         |  |  |                                       | FY 2018 Activity (Unaudited), Pre-Close | Unaudited, Pre-Close CWIP Balance, September 30, 2017 |
|--------|--|--------|---------------------------------|---------------------------------------|--------------------------------|---|-------------------------------|-------------------------|--|--|---------------------------------------|---|---|
|        |  |        |                                 |                                       | Construction: xx-xxxx (616900) | Contractual Engineering Services (617950) | Capitalized Interest (703115) | Other Expenses (617900) | Capital Allocation: Non-Personnel (601998) | Capital Allocation: Personnel (601995) | Capital Allocation: Benefits (601997) |   |   |
| 132003 | Project 132003-Isolation Gate Valves for Line Pumps for West Service Center Pumping Station        | A      | 1,521,000                       | 66,236                                |                                | 40,834                                    |                               |                         |  | 750                                    |                                       | 41,584                                  | 107,820   |
| 113002 | Project 113002-High Lift Pump Discharge Valve Actuators Replacement at Southwest WTP               | A      | 2,120,000                       | 115,027                               |                                | 36,845                                    |                               |                         |  | 2,301                                  | 920                                   | 40,066                                  | 154,172   |
| 170113 | Project 170113-Water Plant Automation  | A      | 1,610,000                       | 12,933                                |                                | 38,942                                    |                               |                         |  |  |                                       | 38,942                                  | 51,875  |
| 170102 | Project 170102-Water Production Plant Flow Metering Improvements at NE, SP & SW WTP                | A      | 1,989,000                       | 269,071                               |                                | 24,717                                    |                               |                         |  |  |                                       | 24,717                                  | 293,789   |
| 114011 | Project 114011-Steam, Condensate Return, and Compressed Air Piping Improvements at Springwells WTP | A      | 6,250,000                       | 279,784                               |                                | 22,475                                    |                               |                         |  | 1,500                                  |                                       | 23,975                                  | 303,759   |
| 115002 | Project 115002-Miscellaneous Concrete and Road Improvements at Waterworks Park WTP                 | PC     | 3,036,000                       | 1,951,164                             | 16,102                         |   |                               |                         |  | 3,654                                  | 1,462                                 | 21,217                                  | 1,970,919   |
| 114004 | Project 114004-Miscellaneous Concrete Improvements at Springwells WTP                              | A      | 998,000                         | -                                     |                                | 18,236                                    |                               |                         |  | 1,016                                  | 106                                   | 19,358                                  | 19,252  |
| 111002 | Project 111002 LHWTP Backflow Replacement  | A      | 7,902,000                       | 309,471                               |                                | 17,612                                    |                               |                         |  | 365                                    | 146                                   | 18,124                                  | 327,448   |
| 113004 | Project 113004-Residual Handling Facility's Decant Flow Modifications at Southwest WTP             | A      | 5,509,000                       | 141,675                               |                                | 15,639                                    |                               |                         |  |  |                                       | 15,639                                  | 157,314   |
| 132004 | Project 132004-Hydraulic Surge Control for North Service Center Pumping Station                    | A      | 2,800,000                       | 75,075                                |                                | 13,411                                    |                               |                         |  | 1,536                                  | 614                                   | 15,561                                  | 90,022  |
| 115004 | Project 115004-Water Works Park WTP Chlorine System Upgrade  | A      | 9,690,000                       | 370,797                               |                                | 12,490                                    |                               |                         |  | 2,099                                  | 840                                   | 15,428                                  | 385,385   |
| 112002 | Project 112002-Low Lift Pumping Plant Caisson Rehabilitation at Northeast WTP                      | A      | 1,775,000                       | 163,085                               |                                | 14,776                                    |                               |                         |  |  |                                       | 14,776                                  | 177,861   |
| 170120 | Project 170120-Phosphoric Acid Feed System Improvements at Southwest WTP                           | A      | 207,500                         | 87,031                                |                                | 13,345                                    |                               |                         |  |  |                                       | 13,345                                  | 100,376   |
| 380501 | Project 380501-Department-Wide General Engineering Services on an As-Needed Basis                  | A      | 5,260,000                       | 132,282                               |                                | 11,911                                    |                               |                         |  |  |                                       | 11,911                                  | 144,193   |
| 170109 | Project 170109-Inspection of Raw Water Intakes and Tunnels   | A      | 2,076,120                       | 2,920,548                             |                                | 9,767                                     |                               |                         |  | 1,392                                  | 557                                   | 11,717                                  | 2,931,708   |

# Water System

## Construction Work-in-Progress Quarterly Report

As of September 30, 2017

Great Lakes Water Authority  
Water System Construction Work-in-Progress (CWIP) FY 2018 Rollforward  
Unaudited, Pre-Close Activity For the Quarter Ended September 30, 2017

| CIP #  | Brief Description   | Status | Total Project Estimate from CIP | CWIP Balance July 1, 2017 (Unaudited) | FY 2018 Activity (Unaudited)   |   |                               |                         |  |  |                                       | FY 2018 Activity (Unaudited), Pre-Close | Unaudited, Pre-Close CWIP Balance, September 30, 2017 |
|--------|---|--------|---------------------------------|---------------------------------------|--------------------------------|---|-------------------------------|-------------------------|--|--|---------------------------------------|---|---|
|        |   |        |                                 |                                       | Construction: xx-xxxx (616900) | Contractual Engineering Services (617950) | Capitalized Interest (703115) | Other Expenses (617900) | Capital Allocation: Non-Personnel (601998) | Capital Allocation: Personnel (601995) | Capital Allocation: Benefits (601997) |   |   |
| 111007 | Project 111007-Lake Huron WTP-Raw Sludge Clarifier and Raw Sludge Pumping System Improvements                               | A      | 7,133,000                       | 9,332                                 |                                | 10,799                                    |                               |                         |  |  |                                       | 10,799                                  | 20,132  |
| 380401 | Project 380400-As-Needed CIP Implementation Assistance and Related Services   | A      | -                               | 105,339                               |                                | 10,744                                    |                               |                         |  |  |                                       | 10,744                                  | 116,083   |
| 170104 | Project 170104-Orion and Newburgh Pumping Stations Improvements   | A      | 2,590,000                       | 164,615                               |                                |   |                               |                         |  | 5,975                                  | 1,890                                 | 7,865                                   | 170,590   |
| 114002 | Project 114002-Springwells Water Treatment Plant - Low Lift and High Lift Pump Station                                      | A      | 86,000,000                      | 22,480                                |                                |   |                               |                         |  | 4,490                                  | 146                                   | 4,637                                   | 26,971  |
| 170011 | Project 170011-Miscellaneous Heating Improvements Southwest WTP   | C      | 563,000                         | -                                     | 3,916                          |   |                               |                         |  | 98                                     | 39                                    | 4,053                                   | 4,014   |
| 380901 | Project 380901- General Engineering Services  | A      | -                               | 74,791                                |                                |   |                               |                         |  | 2,539                                  | 1,016                                 | 3,555                                   | 77,331  |
| 111005 | Project 111005-Miscellaneous Concrete Improvements at the Lake Huron WTP  | PC     | 923,000                         | 754,581                               |                                |   |                               |                         |  | 2,010                                  | 804                                   | 2,813                                   | 756,591   |
| 113001 | Project 113001-Southwest Water Treatment Plant, Sludge Treatment & Waste Wash water Treatment Facilities                    | A      | 49,380,000                      | 39,885                                |                                |   |                               |                         |  | 826                                    | 331                                   | 1,157                                   | 40,711  |
| 170110 | Project 170110- WWP WTP Raw Water Smapling Improvements   | A      | 535,600                         |                                       |                                |   |                               |                         |  | 402                                    | 161                                   | 562                                     | 402   |
| 115003 | Project 115003-Comprehensive Condition Assessment at Waterworks Park WTP  | A      | 575,000                         | -                                     |                                |   |                               |                         |  | 500                                    |                                       | 500                                     | 500   |
| 170401 | Project 170401-Emergency Bypass Around Ypsilanti Station  | A      | 1,150,000                       | 373,858                               |                                |   |                               |                         |  | 329                                    | 132                                   | 461                                     | 374,187   |
| 170201 | Project 17020- Job Order Contract for Construction, Environmental, Speical Testing, Inspection and Other Technical Services | A      | 1,500,000                       |                                       |                                |   |                               |                         |  | 206                                    | 82                                    | 288                                     | 206   |
| 380701 | Project 380701-Engineering Services for Concrete Testing, Geotechnical Soil Borings and Services                            | A      | 2,556,000                       | 115,418                               | -                              | -   |                               |                         |  | 165                                    | 66                                    | 230                                     | 115,583   |
| 132001 | Project 132001-Wick Road Station Rehabilitation   | A      | 13,702,000                      | 85                                    |                                |   |                               |                         |  | 123                                    | 49                                    | 173                                     | 209   |
| 380601 | Project 380601-General Engineering Services   | A      | 8,014,000                       | 157,971                               |                                |   |                               |                         |  | 125                                    |                                       | 125                                     | 158,096   |

# Water System

## Construction Work-in-Progress Quarterly Report

As of September 30, 2017

Great Lakes Water Authority  
Water System Construction Work-in-Progress (CWIP) FY 2018 Rollforward  
Unaudited, Pre-Close Activity For the Quarter Ended September 30, 2017

| CIP #  | Brief Description  | Status | Total Project Estimate from CIP | CWIP Balance July 1, 2017 (Unaudited) | FY 2018 Activity (Unaudited)   |   |                               |                         |  |  |                                       | FY 2018 Activity (Unaudited), Pre-Close | Unaudited, Pre-Close CWIP Balance, September 30, 2017 |
|--------|--|--------|---------------------------------|---------------------------------------|--------------------------------|---|-------------------------------|-------------------------|--|--|---------------------------------------|---|---|
|        |  |        |                                 |                                       | Construction: xx-xxxx (616900) | Contractual Engineering Services (617950) | Capitalized Interest (703115) | Other Expenses (617900) | Capital Allocation: Non-Personnel (601998) | Capital Allocation: Personnel (601995) | Capital Allocation: Benefits (601997) |   |   |
| 004430 | Project 004430-DWSD: Contract Replacement Water Main   | A      | -                               | 75,804                                |                                |   |                               |                         |  |  |                                       | -                                       | 75,804  |
| 007414 | Project 007414- Water Main Repairs shared service with DWSD  | A      |                                 | 536,930                               |                                |   |                               |                         |  |  |                                       | -                                       | 536,930   |
| 111001 | Project 111001-Energy Management: Lake Huron Water Treatment Plant Low Lift Pumping Improvements       | F      | 5,700,000                       | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 111003 | Project 111003-Evaluation of Flocculation Improvement Alternatives at the LHWTP                        | F      | 125,000                         | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 111004 | Project 111004-Electrical Tunnel Rehabilitation at Lake Huron WTP                                      | F      | 5,600,000                       | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 112001 | Project 112001-Yard Piping Replacement at Northeast Water Treatment Plant                              | F      | 800,000                         | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 113003 | Project 113003-Replacement of Butterfly Valves and Sluice Gates for Rapid Mix Chamber at Southwest WTP | F      | 2,940,000                       | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 114005 | Project 114005-Administration Building Improvements at Springwells WTP                                 | F      | 2,000,000                       | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 114006 | Project 114006-Replacement of Rapid Mix Units at Springwells WTP 1958 Process Train                    | A      | 1,250,000                       | 104,286                               |                                |   |                               |                         |  |  |                                       | -                                       | 104,286   |
| 114007 | Project 114007-Powdered Activated Carbon System Improvements at Springwells WTP                        | F      | 2,900,000                       | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 114008 | Project 114008-1930 Sedimentation Basin Sluice Gates, Guides & Hoists Improvements at Springwells WTP  | F      | 7,500,000                       | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 114010 | Project 114010-Yard Piping Improvements at Springwells WTP   | F      | 25,000,000                      | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 114012 | Project 114012-Springwells Water Treatment Plant 1930 Filter Building-Roof Replacement                 | F      | 3,000,000                       | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 114014 | Project 114014-Springwells WTP Underground Fire Protection Loop Improvements                           | F      | 3,289,000                       | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |

# Water System

## Construction Work-in-Progress Quarterly Report

As of September 30, 2017

Great Lakes Water Authority  
Water System Construction Work-in-Progress (CWIP) FY 2018 Rollforward  
Unaudited, Pre-Close Activity For the Quarter Ended September 30, 2017

| CIP #  | Brief Description   | Status | Total Project Estimate from CIP | CWIP Balance July 1, 2017 (Unaudited) | FY 2018 Activity (Unaudited)   |   |                               |                         |  |  |                                       | FY 2018 Activity (Unaudited), Pre-Close | Unaudited, Pre-Close CWIP Balance, September 30, 2017 |
|--------|---|--------|---------------------------------|---------------------------------------|--------------------------------|---|-------------------------------|-------------------------|--|--|---------------------------------------|---|---|
|        |   |        |                                 |                                       | Construction: xx-xxxx (616900) | Contractual Engineering Services (617950) | Capitalized Interest (703115) | Other Expenses (617900) | Capital Allocation: Non-Personnel (601998) | Capital Allocation: Personnel (601995) | Capital Allocation: Benefits (601997) |   |   |
| 116001 | Project 116001-Miscellaneous Improvements to Raw Water Tunnels, Shafts and Related Structures   | F      | 2,500,000                       | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 116002 | Project 116002-Pennsylvania, Springwells and Northeast Raw Water Supply Tunnel Improvements based on Contract CS-1623 Inspection Results        | A      | 32,400,000                      | 10,401                                |                                |   |                               |                         |  |  |                                       | -                                       | 10,401  |
| 116003 | Project 116003-Genesee and Lapeer County Transmission System Improvements   | F      | 6,800,000                       | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 122001 | Project 122001-Parallel 42-Inch Main in 24 Mile Road from Rochester Station to Romeo Plank Road   | PC     | 30,008,000                      | 32,570,891                            |                                |   |                               |                         |  |  |                                       | -                                       | 32,570,891  |
| 122002 | Project 122002-Replacement of Five (5) PRV Pits of Treated Water Transmission System  | A      | 2,220,000                       | 1,696,488                             |                                |   |                               |                         |  |  |                                       | -                                       | 1,696,488   |
| 122003 | Project 122003-New Waterworks Park to Northeast Transmission Main   | A      | 130,000,000                     | 19,372                                |                                |   |                               |                         |  |  |                                       | -                                       | 19,372  |
| 122005 | Project 122005-Transmission System Water Main Work - Replacement of Schoolcraft Water Main  | F      | 14,550,000                      | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 122006 | Project 122006-Transmission System Water Main Work-Wick Road Parallel Water Main  | A      | 19,350,000                      | 23,300                                |                                |   |                               |                         |  |  |                                       | -                                       | 23,300  |
| 122007 | Project 122007-Design and Construction of a new Newburgh Road 24" Main along Newburgh Road between Cherry Hill and Glenwood Avenue              | F      | 4,000,000                       | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 122009 | Project 122009-Water System Improvements in Joy Road from Southfield Road to Trinity  | PC     | 8,423,000                       | 106,881                               |                                |   |                               |                         |  |  |                                       | -                                       | 106,881   |
| 122010 | Project 122010-Water Main Replacement within the City of Detroit - Joy Rd from Greenfield to Schaefer and Davison Ave from Linwood to Livernois | F      | 3,128,000                       | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 122011 | Project 122011-Park-Merriman Water Main-Final Phase   | F      | 4,000,000                       | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |

# Water System

## Construction Work-in-Progress Quarterly Report

As of September 30, 2017

Great Lakes Water Authority  
Water System Construction Work-in-Progress (CWIP) FY 2018 Rollforward  
Unaudited, Pre-Close Activity For the Quarter Ended September 30, 2017

| CIP #  | Brief Description   | Status | Total Project Estimate from CIP | CWIP Balance July 1, 2017 (Unaudited) | FY 2018 Activity (Unaudited)   |   |                               |                         |  |  |                                       | FY 2018 Activity (Unaudited), Pre-Close | Unaudited, Pre-Close CWIP Balance, September 30, 2017 |
|--------|---|--------|---------------------------------|---------------------------------------|--------------------------------|---|-------------------------------|-------------------------|--|--|---------------------------------------|---|---|
|        |   |        |                                 |                                       | Construction: xx-xxxx (616900) | Contractual Engineering Services (617950) | Capitalized Interest (703115) | Other Expenses (617900) | Capital Allocation: Non-Personnel (601998) | Capital Allocation: Personnel (601995) | Capital Allocation: Benefits (601997) |   |   |
| 122013 | Project 122013-Lyon Township Transmission Main Extension Project  | F      | 29,800,000                      | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 132002 | Project 132002-Replacement of Switchgear at Joy Road Pumping Station  | C      | 612,000                         | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 132005 | Project 132005-Energy Management: Evaluate Alternatives and Recommend Corrective Actions to Improve Power Factors (PF) at Various GLWA Booster Pumping Stations | F      | 250,000                         | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 132006 | Project 132006-Pressure and Control Improvements at the Electric, Ford Road, Michigan, and West Chicago Water Booster Pumping Stations                          | F      | 3,000,000                       | 7,524                                 |                                |   |                               |                         |  |  |                                       | -                                       | 7,524   |
| 132007 | Project 132007-Energy Management: Freeze Protection Pump Installation at Imlay Pumping Station  | F      | 1,000,000                       | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 132009 | Project 132009-Study Phase Services for Proposed East Service Center Booster Pumping Station and Reservoir  | A      | 500,000                         | 10,313                                |                                |   |                               |                         |  |  |                                       | -                                       | 10,313  |
| 132011 | Project 132011-Energy Management: West Service Center (WSC) VFD Installation  | F      | 3,334,000                       | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 161001 | Project 161001-Comprehensive Water Master Plan Update   | PC     | 290,000                         | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 170100 | Project 170100-Allowance: WTP/Pump Station  | A      | 76,877,010                      | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 170101 | Project 170101-Master Specs   | PC     | 300,000                         | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 170105 | Project 170105-Phosphoric Acid and Heating System and NE-WTP  | A      | 1,804,620                       | 1,949,623                             |                                |   |                               |                         |  |  |                                       | -                                       | 1,949,623   |
| 170106 | Project 170106- Phosphoric Acid Tank Replacement LHWT   | F      | 575,000                         |                                       |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 170108 | Project 170108- Adams Road Water Isolation Gate   | A      | 1,092,500                       | 625                                   |                                |   |                               |                         |  |  |                                       | -                                       | 625   |
| 170117 | Project 170117-Instrument Air Compressor Systems Replacement at NE-WTP  | PC     | 230,000                         | 226,483                               |                                |   |                               |                         |  |  |                                       | -                                       | 226,483   |
| 170118 | Project 170118-1958 Sedimentation Basin   | C      | 866,000                         | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |



# Water System

## Construction Work-in-Progress Quarterly Report

As of September 30, 2017

Great Lakes Water Authority  
Water System Construction Work-in-Progress (CWIP) FY 2018 Rollforward  
Unaudited, Pre-Close Activity For the Quarter Ended September 30, 2017

| CIP #  | Brief Description  | Status | Total Project Estimate from CIP | CWIP Balance July 1, 2017 (Unaudited) | FY 2018 Activity (Unaudited)   |   |                               |                         |  |  |                                       | FY 2018 Activity (Unaudited), Pre-Close | Unaudited, Pre-Close CWIP Balance, September 30, 2017 |
|--------|--|--------|---------------------------------|---------------------------------------|--------------------------------|---|-------------------------------|-------------------------|--|--|---------------------------------------|---|---|
|        |  |        |                                 |                                       | Construction: xx-xxxx (616900) | Contractual Engineering Services (617950) | Capitalized Interest (703115) | Other Expenses (617900) | Capital Allocation: Non-Personnel (601998) | Capital Allocation: Personnel (601995) | Capital Allocation: Benefits (601997) |   |   |
| 170119 | Project 170119- Belle Isle Water Supply Intake Lagoon  | F      | 115,000                         |                                       |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 170300 | Project 170300-Water Treatment Plant Automation Program  | A      | 5,890,000                       | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 170400 | Project 170400-Water Transmission Improvement Program  | A      | 45,666,500                      |                                       |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 170402 | Project 170402-Emergency Manned Visual Inspection 84-Inch Transmission Main  | A      | 163,500                         | 121,400                               |                                |   |                               |                         |  |  |                                       | -                                       | 121,400   |
| 170403 | Project 170403-Lapeer County Chlorine Booster Station  | A      | 3,020,000                       | 579,723                               |                                |   |                               |                         |  |  |                                       | -                                       | 579,723   |
| 170502 | Project 170502-Transmission System Valve Assessment and Rehabilitation/Replacement   | F      | 15,330,000                      |                                       |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 170600 | Project 170600-Water Transmission Main Asset Assessment Program  | A      | 10,626,000                      | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 170701 | Project 170701-Booster Station & Reservoirs Program Management   | A      | 11,975,000                      | 12,913,885                            |                                |   |                               |                         |  |  |                                       | -                                       | 12,913,885  |
| 170800 | Project 170800-Reservoir Inspection, Design and Rehabilitation at Imlay Station, Adams Station, Haggerty Stations, LH-WTP, SP-WTP and SW-WTP | A      | 11,000,000                      | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 170900 | Project 170900-Suburban Water Meter Pit Rehabilitation and Meter Replacement   | A      | 20,500,000                      | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 331001 | Project 331002-Roofing Replacement   | F      | 11,500,000                      | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 351001 | Project 351001-Water Facility Lighting Renovations   | F      | 2,799,000                       | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 361001 | Project 361001-Consolidated Process Control Systems  | A      | 4,237,000                       | 146,482                               |                                |   |                               |                         |  |  |                                       | -                                       | 146,482   |
| 361002 | Project 361002-Data Control Reliab/Avail Improvements  | A      | 2,851,000                       | 16,080                                |                                |   |                               |                         |  |  |                                       | -                                       | 16,080  |
| 361003 | Project 361003-SCADA Radio Network Upgrade   | A      | 3,484,000                       | 467,427                               |                                |   |                               |                         |  |  |                                       | -                                       | 467,427   |
| 380500 | Project 380500-Department-Wide General Engineering Services on an As-Needed Basis  | A      | -                               | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 380600 | Project 380600-General Engineering Services  | A      | -                               | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |

# Water System

## Construction Work-in-Progress Quarterly Report

As of September 30, 2017

Great Lakes Water Authority  
Water System Construction Work-in-Progress (CWIP) FY 2018 Rollforward  
Unaudited, Pre-Close Activity For the Quarter Ended September 30, 2017

|   |   |        |                                 |                                       | FY 2018 Activity (Unaudited)   |   |                               |                         |  |  |                                       |   |   |
|---|---|--------|---------------------------------|---------------------------------------|--------------------------------|---|-------------------------------|-------------------------|--|--|---------------------------------------|---|---|
| CIP #   | Brief Description   | Status | Total Project Estimate from CIP | CWIP Balance July 1, 2017 (Unaudited) | Construction: xx-xxxx (616900) | Contractual Engineering Services (617950) | Capitalized Interest (703115) | Other Expenses (617900) | Capital Allocation: Non-Personnel (601998) | Capital Allocation: Personnel (601995) | Capital Allocation: Benefits (601997) | FY 2018 Activity (Unaudited), Pre-Close | Unaudited, Pre-Close CWIP Balance, September 30, 2017 |
| 380800  | Project 380800-Geotechnical and Related Services on an As-Needed Basis  | A      | 2,573,000                       | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 380801  | Project 380801-Geotechnical and Related Services on an As-Needed Basis  | A      | -                               | 82,476                                |                                |   |                               |                         |  |  |                                       | -                                       | 82,476  |
| 380900  | Project 390900-General Engineering Services                             | A      | 1,513,000                       | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 381000  | Project 381000-Energy Management: Electric Metering Improvement Program | A      | 3,000,000                       | -                                     |                                |   |                               |                         |  |  |                                       | -                                       | -   |
| 132010  | Project 132010-West Service Center/Duval Rd Division Valve Upgrades     | A      | 11,800,000                      | -                                     |                                | (23,023)                                  |                               |                         |  |  |                                       | (23,023)                                | (23,023)  |
| Total # of Projects and Dollars                     |   |        | 109                             | \$ 1,169,379,000                      | \$ 159,099,050                 | \$ 3,211,304                              | \$ 1,088,514                  | \$ -                    | \$ -                                       | \$ 37,256                              | \$ 96,491                             | \$ 4,455,413                            | \$ 163,532,616  |
| FY 2018 - FY 2022 Water CIP Total (Page IV-2)       |   |        |                                 | \$ 1,169,378,000                      | \$ 159,099,050                 |   |                               |                         |  |  |                                       | 4,455,413                               |   |
| Difference due to rounding                          |   |        |                                 | (1,000)                               | -                              |   |                               |                         |  |  |                                       | -                                       |   |
| Items to be reclassified to Capital Outlay FY 2018  |   |        |                                 |                                       | 287,488                        |   |                               |                         |  |  |                                       |   |   |
| Total CWIP Reported on FY 2017 Financial Statements |   |        |                                 |                                       | 159,386,538                    |   |                               |                         |  |  |                                       |   |   |

## **CIP Allowance and Program Summary**

Within the FY 2018 – 2022 CIP, GLWA has developed budgets for allowances and programs that provide GLWA flexibility in capital development and improvements. These Allowances are established to provide funding related to unanticipated pipeline and equipment failures that require immediate repair and rehabilitation to continuously meet level of service requirements. Allowances can also be allocated to projects with anticipated or actual spend in excess of CIP budget.

Programs are established to provide funding related to specific capital improvements that are system specific, reoccurring, and vary from year to year.

Below are the allowances and programs within the Water System.

### **Allowance**

170100: Water Treatment Plant / Pump Station Allowance

### **Programs**

170200: As Needed Construction Materials, Environmental Media and Special Testing, Construction Inspection, and Other Technical Services

170300: Water Treatment Plant Automation Program

170400: Water Transmission Improvement Program

170500: Transmission System Valve Rehabilitation and Replacement Program

170600: Water Transmission Main Asset Assessment Program

170700: Reservoirs Inspection, Repair and Rehabilitation Program

170800: Reservoir Inspection, Design and Rehabilitation at Imlay Station, Adams Station, Haggerty Station, LH-WTP, SPW-WTP and SW-WTP

170900: Suburban Water Meter Pit Rehabilitation and Meter Replacement

# Water System

## Construction Work-in-Progress Quarterly Report

As of September 30, 2017

**Great Lakes Water Authority**  
**Board Approved CIP Allowance/Program Summary**  
**Allowance: 170100 Water Treatment / Pump Station**

| CIP#   | Contract Number | Description   | Current Year Budget Amendment | FY 2017 Estimate  | FY2018 Estimate   | FY 2019 Estimate  | FY 2020 Estimate  | FY 2021 Estimate  | FY 2022 Estimate  |
|--------|-----------------|---|-------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|        |                 |   |                               |                   |                   |                   |                   |                   |                   |
|        |                 | <b>Water Treatment / Pump Station Allowance</b>     |                               | <b>12,645,000</b> | <b>19,650,000</b> | <b>20,000,000</b> | <b>20,000,000</b> | <b>10,000,000</b> | <b>10,000,000</b> |
| 112002 | CON-215         | Low Lift Chaisson Rehabilitation at NEWTP           | 6857                          | 0                 | (247,000)         | (195,000)         | 0                 | 0                 | 0                 |
| 114001 | CS-200          | Resident Project Representative and O&M for SP-564  | 6904                          | 0                 | (890,000)         | 0                 | 0                 | 0                 | 0                 |
| 114013 | SCP-CS-038      | Professional Engineering Services Springwell WTP    | 6905                          | 0                 | (207,000)         | (172,500)         | (34,500)          | 0                 | 0                 |
| 170011 | SCP-SW-011      | Miscellaneous Heating Improvements at Southwest WTP |                               | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 |
| 170101 | SCP-CS-1630     | Water Transmission Pipeline Improvements            |                               | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 |
| 170102 | SCP-CS-1656     | Water Production Plant Flow Meter                   | 6859                          | (400,000)         | (105,000)         | 0                 | 0                 | 0                 | 0                 |
|        |                 | Belle Isle Ice Boom Replacement & Reinforcement     |                               |                   |                   |                   |                   |                   |                   |
| 170103 | SCP-CON-094     | Upgrade   |                               | (369,150)         | 0                 | 0                 | 0                 | 0                 | 0                 |
| 170104 | SCP-CS-1738     | Orion Pumping Station Improvements                  | 6923                          | (145,000)         | (500,000)         | (1,800,000)       | 0                 | 0                 | 0                 |
|        |                 | Phosphoric Acid and Heating System Improvements     |                               | (1,361,100)       | 0                 | 0                 | 0                 | 0                 | 0                 |
| 170106 | SCP-LH-398      | Phosphoric Acid Tank Replacement LHWT               |                               | (575,000)         | 0                 | 0                 | 0                 | 0                 | 0                 |
| 170107 | SCP-DWS-059     | Belle Isle Water Intake Bridge Improvements         | 6862                          | 0                 | (358,500)         | 0                 | 0                 | 0                 | 0                 |
| 170108 | SCP-DWS-063     | Adams Rd Water Booster Isolation Gate               | 6900                          | (600,000)         | (192,500)         | 0                 | 0                 | 0                 | 0                 |
| 170109 | SCP-CS-1623     | Inspection of Three Water Intakes                   | 6864                          | (500,000)         | (500,000)         | (3,000)           | 0                 | 0                 | 0                 |
| 170110 | CON-153         | WWP WTP Raw Water Sampling Improvements             |                               | (430,000)         | 0                 | 0                 | 0                 | 0                 | 0                 |
| 170117 | SCP-NE-007A     | Instrument Air Compressor NEWTP                     |                               | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 |
| 170118 | SCP-SP-009      | Sedimentation Basin Sludge Removal                  |                               | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 |
| 170119 | SCP-CS-1685     | Belle Isle Water Supply Intake Lagoon               |                               | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 |
| 170120 | SCP-CS-1692     | Acid and Chlorine Feed Improvements SWWP            |                               | (50,000)          | 0                 | 0                 | 0                 | 0                 | 0                 |
|        |                 | <b>Available Balance</b>                            |                               | <b>8,214,750</b>  | <b>16,650,000</b> | <b>17,829,500</b> | <b>19,965,500</b> | <b>10,000,000</b> | <b>10,000,000</b> |

## Water System Construction Work-in-Progress Quarterly Report

As of September 30, 2017

**Great Lakes Water Authority**

**Board Approved CIP Allowance/Program Summary**

**Program: 170200 As Needed Construction Materials, Environmental Media and Special Testing Services**

**Construction Inspection, and other Technical Services**

| CIP#   | Contract Number | Description                      | Current Year Budget Amendment | FY 2017 Estimate | FY2018 Estimate | FY 2019 Estimate | FY 2020 Estimate | FY 2021 Estimate | FY 2022 Estimate |
|--------|-----------------|----------------------------------|-------------------------------|------------------|-----------------|------------------|------------------|------------------|------------------|
| 170200 |                 | As Needed Materials and Services |                               | 0                | 500,000         | 500,000          | 500,000          | 0                | 0                |
|        |                 | Available Balance                |                               | 0                | 500,000         | 500,000          | 500,000          | 0                | 0                |

**Great Lakes Water Authority**

**Board Approved CIP Allowance/Program Summary**

**Program: 170300 Water Treatment Plant Automation**

| CIP#   | Contract Number | Description                              | Current Year Budget Amendment | FY 2017 Estimate | FY2018 Estimate | FY 2019 Estimate | FY 2020 Estimate | FY 2021 Estimate | FY 2022 Estimate |
|--------|-----------------|--|-------------------------------|------------------|-----------------|------------------|------------------|------------------|------------------|
| 170300 |                 | Water Treatment Plant Automation Program |                               | 0                | 1,500,000       | 1,500,000        | 1,500,000        | 1,500,000        | 1,500,000        |
| 170113 | CS-108          | Water Plant Automation Needs Assessment  | 6867                          | (520,000)        | (1,090,000)     |                  |                  |                  |                  |
| Total  |                 | Available Balance                        |                               | (520,000)        | 410,000         | 1,500,000        | 1,500,000        | 1,500,000        | 1,500,000        |

## Water System Construction Work-in-Progress Quarterly Report

As of September 30, 2017

**Great Lakes Water Authority**  
**Board Approved CIP Allowance/Program Summary**  
**Program: 170400 Water Transmission Improvement**

| CIP#   | Contract Number | Description                                    | Current Year Budget Amendment | FY 2017 Estimate | FY2018 Estimate | FY 2019 Estimate | FY 2020 Estimate | FY 2021 Estimate | FY 2022 Estimate |
|--------|-----------------|--|-------------------------------|------------------|-----------------|------------------|------------------|------------------|------------------|
| 170400 |                 | Water Transmission Improvements Program        |                               | 0                | 10,000,000      | 10,000,000       | 10,000,000       | 10,000,000       | 10,000,000       |
| 170402 | PO# 0004292     | 84" Transmission Water Main Assessment in Troy |                               | (163,500)        |                 |                  |                  |                  |                  |
| 170403 | GLWA-DBW-070    | Lapeer County Chlorine Booster Stations        | 6932                          |                  | (2,900,000)     | (120,000)        |                  |                  |                  |
|        |                 | Available Balance                              |                               | (163,500)        | 7,100,000       | 9,880,000        | 10,000,000       | 10,000,000       | 10,000,000       |

**Great Lakes Water Authority**  
**Board Approved CIP Allowance/Program Summary**  
**Program: 170500 Transmission System Valve Rehabilitation and Replacement**

| CIP#   | Contract Number | Description   | Current Year Budget Amendment | FY 2017 Estimate | FY2018 Estimate | FY 2019 Estimate | FY 2020 Estimate | FY 2021 Estimate | FY 2022 Estimate |
|--------|-----------------|---|-------------------------------|------------------|-----------------|------------------|------------------|------------------|------------------|
| 170500 |                 | Transmission System Valve Assessment and Rehabilitation / Replacement   |                               | 0                | 5,036,000       | 5,036,000        | 3,036,000        | 2,186,000        | 36,000           |
| 170502 | CON-181         | Transmission System Valve Assessment and Rehabilitation and Replacement | 6977                          | 0                | (5,036,000)     | (5,036,000)      | (3,036,000)      | (2,186,000)      | (36,000)         |
|        |                 | Available Balance   |                               | 0                | 0               | 0                | 0                | 0                | 0                |



**Great Lakes Water Authority**  
**Board Approved CIP Allowance/Program Summary**  
**Program: 170600 Water Transmission Main Asset Assessment**

| CIP#   | Contract Number | Description                                      | Current Year Budget Amendment | FY 2017 Estimate | FY2018 Estimate | FY 2019 Estimate | FY 2020 Estimate | FY 2021 Estimate | FY 2022 Estimate |
|--------|-----------------|--|-------------------------------|------------------|-----------------|------------------|------------------|------------------|------------------|
| 170600 |                 | Water Transmission Main Asset Assessment Program |                               | 0                | 2,626,000       | 2,000,000        | 2,000,000        | 2,000,000        | 2,000,000        |
|        |                 | Available Balance                                |                               | 0                | 2,626,000       | 2,000,000        | 2,000,000        | 2,000,000        | 2,000,000        |

**Great Lakes Water Authority**  
**Board Approved CIP Allowance/Program Summary**  
**Program: 170700 Reservoirs Inspection, Repair and Rehabilitation**

| CIP#   | Contract Number | Description  | Current Year Budget Amendment | FY 2017 Estimate | FY2018 Estimate | FY 2019 Estimate | FY 2020 Estimate | FY 2021 Estimate | FY 2022 Estimate |
|--------|-----------------|--|-------------------------------|------------------|-----------------|------------------|------------------|------------------|------------------|
| 170700 |                 | Booster Stations and Reservoirs Inspection, Rehabilitation and Inspection Repair Program |                               | 2,316,000        | 88,000          |                  |                  |                  |                  |
| 170701 | DWS-874         | Booster Stations & Reservoirs Inspection   | N/A                           | (2,316,000)      | (88,000)        | 0                | 0                | 0                | 0                |
|        |                 | Available Balance  |                               | 0                | 0               | 0                | 0                | 0                | 0                |

**Great Lakes Water Authority**  
**Board Approved CIP Allowance/Program Summary**  
**Program: 170800 Reservoir Inspection, Design and Rehabilitation at Implay Station, Adams Station**  
**Haggerty Station, LH-WTP, SPW-WTP and SW-WTP**

| CIP#   | Contract Number | Description   | Current Year Budget Amendment | FY 2017 Estimate | FY2018 Estimate | FY 2019 Estimate | FY 2020 Estimate | FY 2021 Estimate | FY 2022 Estimate |
|--------|-----------------|---|-------------------------------|------------------|-----------------|------------------|------------------|------------------|------------------|
| 170800 |                 | Reservoir Inspection, Design and Rehabilitation at Implay Station, Adams Station, Haggerty Station, LH-WTP, SP-WTP and SW-WTP Program |                               | 50,000           | 3,300,000       | 2,550,000        | 2,550,000        | 2,550,000        |                  |
|        |                 | Available Balance   |                               | 50,000           | 3,300,000       | 2,550,000        | 2,550,000        | 2,550,000        | 0                |

**Great Lakes Water Authority**  
**Board Approved CIP Allowance/Program Summary**  
**Program: 170900 Suburban Water Meter Pit Rehabilitation and Meter Replacement**

| CIP#   | Contract Number | Description   | Current Year Budget Amendment | FY 2017 Estimate | FY2018 Estimate | FY 2019 Estimate | FY 2020 Estimate | FY 2021 Estimate | FY 2022 Estimate |
|--------|-----------------|---|-------------------------------|------------------|-----------------|------------------|------------------|------------------|------------------|
| 170900 |                 | Suburban Water Meter Pit Rehabilitation and Meter Replacement Program |                               | 500,000          | 4,000,000       | 4,000,000        | 4,000,000        | 4,000,000        | 4,000,000        |
|        |                 | Available Balance   |                               | 500,000          | 4,000,000       | 4,000,000        | 4,000,000        | 4,000,000        | 4,000,000        |

## **Budget Amendment Reporting**

**Scope:** The budget amendments seek to properly allocate funds from the allowance and programs within the Capital Improvement Plan (CIP) for the budgeted years by the reallocation of funds from the budgeted allowance or programs level to the actual project level.

**Process:** Steps are listed below.

- 1) To properly identify projects that utilize funds from the allowance or programs
- 2) Reallocate the funds from the budgeted allowance or programs level through a journal entry
- 3) Attach supporting documents to support the reallocation (CIP funding request, contract transmittal, or change orders)
- 4) Create, review, and approve budget amendment journal entry

**Great Lakes Water Authority**  
**Budget Amendments Processed for FY 2018 Through September 30, 2017**

| Budget Amendments / Descriptions / Reasons / GL Strings  |                               | Amount    |
|--|-------------------------------|-----------|
| <b>6857</b>  |                               |           |
| <b>CIP 170100 Water Treatment / Pump Station Allowance</b>                                     |                               |           |
| To fund Salaries, Benefits and Construction Services that exceeds FY 2018-2022 CIP             |                               |           |
| <b>Allocation of Allowance Budget</b>  |                               |           |
|  | 5519-882111.000-616900-170100 | (247,000) |
| <b>CIP 112002 Low Lift Chaisson Rehabilitation at NE-WTP</b>                                   |                               |           |
| To fund Salaries, Benefits and Construction Services that exceeds FY 2018-2022 CIP             |                               |           |
| <b>Executed Contract in excess of CIP Budget</b>   |                               |           |
|  | 5519-882111.000-616900-112002 | 147,000   |
| <b>Benefits Allocation (Not included in FY 2018 - 2022 CIP)</b>                                |                               |           |
|  | 5519-882111.000-601997-112002 | 40,000    |
| <b>Salaries Allocation (Not included in FY 2018 - 2022 CIP)</b>                                |                               |           |
|  | 5519-882111.000-601995-112002 | 60,000    |
| <b>6859</b>  |                               |           |
| <b>CIP 170100 Water Treatment / Pump Station Allowance</b>                                     |                               |           |
| To fund Contracted Design Services, Salaries and Benefits not budgeted for in FY 2018-2022 CIP |                               |           |
| <b>Allocation of Allowance Budget</b>  |                               |           |
|  | 5519-882111.000-616900-170100 | (105,000) |
| <b>CIP 170102 Water Production Plant Flow Meter</b>  |                               |           |
| To fund Contracted Design Services, Salaries and Benefits not budgeted for in FY 2018-2022 CIP |                               |           |
| <b>Project was not included in FY 2018-2022 CIP</b>  |                               |           |
|  | 5519-882111.000-617950-170102 | 20,000    |
| <b>Benefits Allocation (Not included in FY 2018 - 2022 CIP)</b>                                |                               |           |
|  | 5519-882111.000-601997-170102 | 34,000    |
| <b>Salaries Allocation (Not included in FY 2018 - 2022 CIP)</b>                                |                               |           |
|  | 5519-882111.000-601995-170102 | 51,000    |

**6862**

**CIP 170100 Water Treatment / Pump Station Allowance**

To fund Contracted Design Services, Salaries and Benefits not budgeted for in FY 2018-2022 CIP

**Allocation of Allowance Budget**

5519-882111.000-616900-170100 (358,500)

**CIP 170107 Belle Isle Water Intake Bridge Improvements**

To fund Contracted Design Services, Salaries and Benefits not budgeted for in FY 2018-2022 CIP

**Project was not included in FY 2018-2022 CIP**

5519-882111.000-616900-170107 321,000

**Benefits Allocation (Not included in FY 2018 - 2022 CIP)**

5519-882111.000-601997-170107 15,000

**Salaries Allocation (Not included in FY 2018 - 2022 CIP)**

5519-882111.000-601995-170107 22,500

**6864**

**CIP 170100 Water Treatment / Pump Station Allowance**

To fund Contracted Design Services, Salaries and Benefits not budgeted for in FY 2018-2022 CIP

**Allocation of Allowance Budget**

5519-882111.000-616900-170100 (500,000)

**CIP 170109 Inspection of Three Water Intakes**

To fund Contracted Design Services, Salaries and Benefits not budgeted for in FY 2018-2022 CIP

**Project was not included in FY 2018-2022 CIP**

5519-882111.000-617950-170109 447,400

**Benefits Allocation (Not included in FY 2018 - 2022 CIP)**

5519-882111.000-601997-170109 21,040

**Salaries Allocation (Not included in FY 2018 - 2022 CIP)**

5519-882111.000-601995-170109 31,560

**6867**

**CIP 170300 Water Plant Automation Needs Assessment**

To Fund Design Services Salaries, and Benefits related to budgeted program assigned

**Allocation of Program Budget**

5519-882111.000-616900-170300 (1,090,000)

**CIP 170113 Water Plant Automation Needs Assessment**

To Fund Design Services Salaries, and Benefits related to budgeted program assigned

**Benefits Allocation**

5519-882111.000-601997-170113 42,000

**Program Needs Assigned**

5519-882111.000-617950-170113 985,000

**Allocation of Program Salaries**

5519-882111.000-601995-170113 63,000

**6900**

**CIP 170100 Water Treatment / Pump Station Allowance**

To fund Contracted Constructed Services, Materials, Salaries and Benefits not budgeted for in FY 2018-2022 CIP

**Allocation of Allowance Budget**

5519-882111.000-616900-170100 (192,500)

**CIP 170108 Adams Road Water Booster Isolation Gate**

To fund Contracted Constructed Services, Materials, Salaries and Benefits not budgeted for in FY 2018-2022 CIP

**Project was not included in FY 2018-2022 CIP**

5519-882111.000-616900-170108 97,000

5519-882111.000-617955-170108 70,000

**Benefits Allocation (Not included in FY 2018 - 2022 CIP)**

5519-882111.000-601997-170108 10,200

**Salaries Allocation (Not included in FY 2018 - 2022 CIP)**

5519-882111.000-601995-170108 15,300



**6904**

**CIP 170100 Water Treatment / Pump Station Allowance**

To fund Owner's Rep Service that were not part of FY2018-2022 CIP Plan

**Allocation of Allowance Budget**

5519-882111.000-616900-170100 (890,000)

**CIP 114001 Resident Project Representative for SP-563**

To fund Owner's Rep Service that were not part of FY2018-2022 CIP Plan

**Executed Contract in excess of CIP Budget**

5519-882111.000-617950-114001 890,000

**6905**

**CIP 170100 Water Treatment / Pump Station Allowance**

To fund Salaries, Benefits and Construction Services that exceed FY 2018-2022 CIP

**Allocation of Allowance Budget**

5519-882111.000-616900-170100 (207,000)

**CIP 114013 Professional Engineering Services Springwells WTP**

To fund Salaries, Benefits and Construction Services that exceed FY 2018-2022 CIP

**Executed Contract in excess of CIP Budget**

5519-882111.000-617950-114013 180,000

**Benefits Allocation (Not included in FY 2018 - 2022 CIP)**

5519-882111.000-601997-114013 10,800

**Salaries Allocation (Not included in FY 2018 - 2022 CIP)**

5519-882111.000-601995-114013 16,200

**6923**

**CIP 170100 Water Treatment / Pump Station Allowance**

To fund Contracted Design Services, Salaries and Benefits not budgeted for in FY 2018-2022 CIP

**Allocation of Allowance Budget**

5519-882111.000-616900-170100 (500,000)

**CIP 170104 Orion Pumping Station Improvements**

To fund Contracted Design Services, Salaries and Benefits not budgeted for in FY 2018-2022 CIP

**Project was not included in FY 2018-2022 CIP**

5519-882111.000-616900-170104 450,000

**Benefits Allocation (Not included in FY 2018 - 2022 CIP)**

5519-882111.000-601997-170104 20,000

**Salaries Allocation (Not included in FY 2018 - 2022 CIP)**

5519-882111.000-601995-170104 30,000

**6932**

**CIP 170400 Water Transmission Improvements Program**

To Fund Construction, Inspection, Salaries and Benefits related to budgeted program assigned

**Allocation of Program Budget**

5519-882111.000-616900-170400 (2,529,000)

5519-882111.000-617950-170400 (371,000)

**CIP 170403 Lapeer County Chlorine Booster Stations**

To Fund Construction, Inspection, Salaries and Benefits related to budgeted program assigned

**Benefits Allocation**

5519-882111.000-601997-170403 9,900

**Program Needs Assigned**

5519-882111.000-601998-170403 6,600

**Allocation of Program Salaries**

5519-882111.000-601995-170403 17,500

**Allocation for Design Services Contract**

5519-882111.000-617950-170403 371,000

**Allocation for Construction Services Contract**

5519-882111.000-616900-170403 2,495,000

6977

**CIP 170500 Transmission System Valve Assessment and Rehabilitation / Replacement Program**

To Fund Construction, Inspection, Salaries and Benefits related to budgeted program assigned

**Allocation of Program Budget**

|                               |             |
|-------------------------------|-------------|
| 5519-882111.000-601995-170500 | (24,000)    |
| 5519-882111.000-601997-170500 | (9,000)     |
| 5519-882111.000-601998-170500 | (1,000)     |
| 5519-882111.000-616900-170500 | (2,896,000) |

**CIP 170502 Transmission System Valve Assessment and Rehabilitation and Replacement**

To Fund Construction, Inspection, Salaries and Benefits related to budgeted program assigned

**Allocation for Program Inspection Services**

|                               |       |
|-------------------------------|-------|
| 5519-882111.000-601998-170502 | 1,000 |
|-------------------------------|-------|

**Allocation for Program Benefits**

|                               |        |
|-------------------------------|--------|
| 5519-882111.000-601997-170502 | 10,000 |
|-------------------------------|--------|

**Allocation for Program Salaries**

|                               |        |
|-------------------------------|--------|
| 5519-882111.000-601995-170502 | 25,000 |
|-------------------------------|--------|

**Allocation for Program Design Services**

|                               |         |
|-------------------------------|---------|
| 5519-882111.000-617950-170502 | 320,000 |
|-------------------------------|---------|

**Allocation for Program Construction Services**

|                               |           |
|-------------------------------|-----------|
| 5519-882111.000-616900-170502 | 2,574,000 |
|-------------------------------|-----------|

**Grand Total**

-

## WASTEWATER SYSTEM

### Percent of Spend Compared to Annual Budget and Capital Improvement Plan (CIP) Requests

The rate of spend is a key performance indicator. The ratios for FY 2017 (twelve months) of 55% and for FY 2018 (three months) of 50.1% are lower than simple benchmark of 80% and 25% respectively. This is attributable to three reasons. First, competition for staff priorities during stand-up of the GLWA (primarily during FY 2017). Second, is the alignment of projects identified and staff or contractor resources to carry out the projects. Several key hires occurred primarily during fiscal FY 2017 will improve this performance. Third, is the phasing of CIP activity which is being further refined throughout GLWA.

|   | FY 2017 Original<br>Plan and Budget<br>(Twelve Months) | FY 2017<br>(Unaudited),<br>Activity | FY 2017 (Unaudited),<br>Activity as a Percent<br>of Budget | FY 2018<br>Amended<br>Budget | FY 2018 Prorated<br>Amended Budget<br>(Three Months) | FY 2018<br>(Unaudited), Pre-<br>Close Activity<br>(Three Months) | FY 2018 (Unaudited), Pre-<br>Close Activity as a Percent<br>of Prorated Budget<br>(Three Months) |
|---|--|-------------------------------------|--|------------------------------|--|--|--|
| Wastewater System Projects                      |  |                                     |  |                              |  |  |  |
| FY 2017 CIP Project Requests @ 100%             | \$ 128,973,000   |                                     |  |                              |  |  |  |
| FY 2017 CIP Net Budget (approx. 80% of request) | 103,178,400  | \$ 56,788,123                       | 55.0%  |                              |  |  |  |
| FY 2018 CIP Project Requests @ 100%             |  |                                     |  | \$ 160,746,000               | \$ 40,186,500  |  |  |
| FY 2018 CIP Net Budget (approx. 80% of request) |  |                                     |  | 128,596,800                  | \$ 32,149,200  | \$ 16,098,426  | 50.1%  |

It should be noted that these interim reports have been prepared on a modified cash basis. This means that expenses may lag in vendor invoice receipt and posting. Known expenses, material in nature, have been accrued.

## Analysis of Projects with Largest Percent of Spend and Otherwise Noteworthy Projects

Of the total Wastewater System Construction Bond spend for FY 2018 to date, **four projects account for \$11.7 million or 72.6% of the total spend**. Those projects are summarized in the following table. An analysis of each project and its related CIP summary follow the table. Note that the last page of this report provides a Glossary of Acronyms.

| Wastewater System Projects  | Total Project<br>Budget per CIP<br>(Life of Projects) | Life-to-Date<br>Through June 30,<br>2017 (Unaudited) | FY 2018<br>Requested<br>Budget per CIP | FY 2018<br>(Unaudited), Pre-<br>Close Activity<br>(Three Months) | FY 2018 (Unaudited),<br>Pre-Close Activity as a<br>Percent of Total Sewer<br>Actual Expenses<br>(Three Months) |
|---|---|--|--|--|--|
| <b>Project 211001: Rehabilitation of Primary Clarifiers<br/>Rectangular Tanks, Drain Lines, Electrical/Mechanical<br/>Building and Pipe Gallery</b> | \$ 51,903,000   | \$ 10,243,275  | \$ 12,097,000                          | \$ 4,131,529   | <b>25.7%</b>   |
| <b>Project 212003: Aeration System Improvements</b>   | \$ 16,203,000   | \$ 3,804,993   | \$ 11,197,000                          | \$ 3,236,909   | <b>20.1%</b>   |
| <b>Project 212006: PC-797 Rouge River Outfall<br/>Disinfection and CS-1781 Oversight Consulting<br/>Services Contract</b>                           | \$ 47,599,000   | \$ 6,872,993   | \$ 15,800,000                          | \$ 3,095,240   | <b>19.2%</b>   |
| <b>Project 232002: Freud and Connor Creek Pump<br/>Station Improvements</b>   | \$ 22,500,000   | \$ 2,100,803   | \$ 5,900,000                           | \$ 1,230,332   | <b>7.6%</b>  |
| <b>Selected Projects as a Percentage of the Total</b>   | <b>\$ 138,205,000</b>                                 | <b>\$ 23,022,064</b>                                 | <b>\$ 44,994,000</b>                   | <b>\$ 11,694,010</b>   | <b>72.6%</b>   |
| <b>Total Wastewater Construction Bond</b>   |   |  | <b>\$ 160,746,000</b>                  | <b>\$ 16,098,426</b>   | <b>100.0%</b>  |

**Project 211001–Rehabilitation of Primary Rectangular Clarifiers**

|  | Total Project<br>Budget per CIP<br>(Life of Projects) | Life-to-Date Through<br>June 30, 2017<br>(Unaudited) | FY 2018<br>Requested<br>Budget per CIP | FY 2018<br>(Unaudited), Pre-<br>Close Activity<br>(Three Months) | FY 2018 (Unaudited),<br>Pre-Close Activity as a<br>Percent of Total Sewer<br>Actual Expenses<br>(Three Months) |
|--|---|--|--|--|--|
| Wastewater System Projects   |   |  |  |  |  |
| Project 211001: Rehabilitation of Primary Clarifiers<br>Rectangular Tanks, Drain Lines, Electrical/Mechanical<br>Building and Pipe Gallery | \$ 51,903,000   | \$ 10,243,275  | \$ 12,097,000                          | \$ 4,131,529   | 25.7%  |

**Project Manager:** Nicolas Nicolas

**Total Budget:** \$51,903,000

**Timeline:** To be completed by May 2020

**FY 2018 Last Pay Estimate Processed:** September 30, 2017

**Key Contracts/Vendors:** PC-757 Toolles Contracting Group

**Project Description:** The Rehabilitation of Primary Rectangular Clarifiers Tanks, Drain Lines, Electrical/Mechanical Building, Pipe Gallery, and Replacement of Rake Arm assembly for Circular Primary Clarifiers No. 15 and 16 at the Water Resource Recovery Facility (WRRF).

**Purpose:** To improve the operating and maintenance efficiencies that meets the regulatory National Pollution Discharge Elimination (NPDES) Permit and National Electrical code (NEC) requirements.

**Status:** Rehabilitation of Primary rectangular clarifiers 11 and 12 (EVOQUA equipment only) is complete. The schedule has slipped behind due to sludge pump issues in which the contractor and GLWA are working to resolve.

**Additional Project Manager Comments:** There are no additional comments to provide at this time.



**FY 2018-2022 CIP Page VI-73 for Project 211001–Rehabilitation of Primary Rectangular Clarifiers**

**CIP Number:** CIP 291

**Title:** REHABILITATION OF PRIMARY CLARIFIERS RECTANGULAR TANKS, DRAIN LINES, ELECTRICAL/MECHANICAL BUILDING AND PIPE GALLERY

**Classification:** 211: Wastewater > WRRF > Primary Treatment

**Managing Dept:** WW Eng

**RC Score:** NA

**Contract No.:** PC-757

**Significance:** Rehabilitation for meeting NPDES Permit and NEC requirements

**Location:** WRRF

**Driver:** N/A - Active

**Explanation:** N/A - Active

**Preliminary Scope of Work:**

The work to be completed under this project will include installing ventilation and atmospheric control for the pipe gallery; providing new lights and emergency lights, etc.. This work also includes rehabilitation of 12 drain lines from rectangular clarifiers 3-12, circular clarifiers 16 and 16, installation of large manhole with sump pumps to collect drainage and discharge to clarifier, and concrete crack repairs, and rehabilitation work in Electrical/Mechanical Building.

**Challenges:** N/A - Active

**Initial Project Cost Estimates (in \$1000s)**

| Phase  | Status | Start Date | End Date | Lifetime Actual Thru FY2016 (Unaudited) | Projected Expenditures FY2017 | Projected Expenditures FY2018 | Projected Expenditures FY2019 | Projected Expenditures FY2020 | Projected Expenditures FY2021 | Projected Expenditures FY2022 | Projected Expenditures FY2023 & Beyond | 2018-2022 CIP Total | Phase Total |
|--------|--------|------------|----------|---|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|--|---------------------|-------------|
| C      | Active | TBD        | TBD      | \$0                                     | \$10848                       | \$12097                       | \$20990                       | \$7968                        | \$0                           | \$0                           | \$0                                    | \$41055             | \$51903     |
| Totals |        |            |          | \$0                                     | \$10848                       | \$12097                       | \$20990                       | \$7968                        | \$0                           | \$0                           | \$0                                    | \$41055             | \$51903     |



Pipe gallery

### Project 212003-Aeration System Improvements

|   | Total Project<br>Budget per CIP<br>(Life of Projects) | Life-to-Date Through<br>June 30, 2017<br>(Unaudited) | FY 2018<br>Requested<br>Budget per CIP | FY 2018<br>(Unaudited), Pre-<br>Close Activity<br>(Three Months) | FY 2018 (Unaudited),<br>Pre-Close Activity as a<br>Percent of Total Sewer<br>Actual Expenses<br>(Three Months) |
|---|---|--|--|--|--|
| Wastewater System Projects                          |   |  |  |  |  |
| <b>Project 212003: Aeration System Improvements</b> | \$ 16,203,000   | \$ 3,804,993   | \$ 11,197,000                          | \$ 3,236,909   | <b>20.1%</b>   |

**Project Manager:** Vinod Sharma

**Total Construction Budget:** \$15,985,000

**Timeline:** To be completed by September 2018

**FY 2018 Last Pay Estimate Processed:** September 30, 2017

**Key Contracts/Vendors:** CS-1498, CS-157-Metco Services, PC-796-Weiss Construction

**Project Description/Purpose:-**The Aeration System Improvements will increase the efficiency of oxygen used in the High Purity Oxygen (HPO) activated sludge process, reduce the risk of mechanical failures with the replacement/rehabilitation of the Influent and Return Activated Sludge (RAS) valves/pipeline would meet regulatory guidelines to comply with NPDES Permit.

**Status:** The construction work associated with aeration basin No. 4 process piping/valve is completed and basin No.4 is put back into operation. The rehab work associated with Basin No. 3 is ongoing.

**Additional Project Manager Comments:** There are no additional comments to provide at this time.

**FY 2018-2022 CIP Page VI-83 for Project 212003-Aeration System Improvements**

**CIP Number:** CIP 1194

**Title:** AERATION SYSTEM IMPROVEMENTS

**Classification:** 212: Wastewater > WRRF > Secondary Treatment & Disinfection

**Managing Dept:** WW Eng

**RC Score:** NA

**Contract No.:** CS-1498, PC-796

**Significance:** Improve aeration system and provide necessary inter-connections

**Location:** WRRF

**Driver:** N/A - Under Procurement

**Explanation:** N/A - Under Procurement

**Preliminary Scope of Work:**

The scope of work includes study, design, and construction assistance for the oxygen baffle on Bay 10 of A1 & A2 decks, replacement of influent, Return Activated Sludge (RAS) piping, isolation gate and valves for decks Nos. 3 & 4, replace RAS and influent magmeters for Intermediate Lift Pumps (ILP) Nos. 3, 4 & 7. The work also includes replacement of influent gates and operators on Aeration Deck No. 1 & 2.

**Challenges:** N/A - Under Procurement

**Initial Project Cost Estimates (in \$1000s)**

| Phase  | Status            | Start Date | End Date  | Lifetime Actual Thru FY2016 (Unaudited) | Projected Expenditures FY2017 | Projected Expenditures FY2018 | Projected Expenditures FY2019 | Projected Expenditures FY2020 | Projected Expenditures FY2021 | Projected Expenditures FY2022 | Projected Expenditures FY2023 & Beyond | 2018-2022 CIP Total | Phase Total |
|--------|-------------------|------------|-----------|---|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|--|---------------------|-------------|
| S/D/CA | Active            | 2/21/2012  | 2/28/2018 | \$0                                     | \$106                         | \$97                          | \$16                          | \$0                           | \$0                           | \$0                           | \$0                                    | \$113               | \$219       |
| C      | Under Procurement | TBD        | TBD       | \$0                                     | \$2242                        | \$11100                       | \$2642                        | \$0                           | \$0                           | \$0                           | \$0                                    | \$13742             | \$15984     |
| Totals |                   |            |           | \$0                                     | \$2348                        | \$11197                       | \$2658                        | \$0                           | \$0                           | \$0                           | \$0                                    | \$13855             | \$16203     |



Equipment for aeration system

**Project 212006-Rouge River Outfall Project**

|   | Total Project<br>Budget per CIP<br>(Life of Projects) | Life-to-Date Through<br>June 30, 2017<br>(Unaudited) | FY 2018<br>Requested<br>Budget per CIP | FY 2018<br>(Unaudited), Pre-<br>Close Activity<br>(Three Months) | FY 2018 (Unaudited),<br>Pre-Close Activity as a<br>Percent of Total Sewer<br>Actual Expenses<br>(Three Months) |
|---|---|--|--|--|--|
| <b>Wastewater System Projects</b>   |   |  |  |  |  |
| <b>Project 212006: PC-797 Rouge River Outfall<br/>Disinfection and CS-1781 Oversight Consulting<br/>Services Contract</b> | \$ 47,599,000   | \$ 6,872,993   | \$ 15,800,000                          | \$ 3,095,240   | <b>19.2%</b>   |

**Project Manager:** Phil Kora

**Total Budget:** \$46,833,356

**Timeline:** To be substantially complete by April 2019

**FY 2018 Last Pay Estimate Processed:** September 30, 2017

**Key Contracts/Vendors:** CS-1781- PMA Consultants and PC-797-CDM Construction

**Project Description/Purpose:** The Rouge River Outfall Disinfection Project (Phase 2) is MDEQ approved to provide chlorination and de-chlorination to the Rouge River Outfall (RRO) effluent during wet weather events.

**Status:** The project is on schedule and billing through September 2017.

**Additional Project Manager Comments:** There are no additional comments to provide at this time.

**FY 2018-2022 CIP Page VI-98 for 212006-Rouge River Outfall Project**

**CIP Number:** CIP 1302

**Title:** ROUGE RIVER OUTFALL (RRO) DISINFECTION (ALTERNATIVE)

**Classification:** 212: Wastewater > WRRF > Secondary Treatment & Disinfection

**Managing Dept:** WW Eng

**RC Score:** NA

**Contract No.:** PC-797, CS-1781

**Significance:** Provide project oversight and design build services for alternative disinfection services to meet NPDES Permit requirements at existing Rouge River Outfall

**Location:** Rouge River Outfall

**Driver:** 3 – Regulatory (Environmental/Legal)

**Explanation:** In order to be in compliance with its NPDES permit, GLWA's WRRF must provide disinfection to all effluent flows from the DRO and RRO by April 2019. Only the DRO currently has disinfection; this project will provide chlorination and de-chlorination for RRO effluent during wet weather events.

**Preliminary Scope of Work:**

The consultant shall provide comprehensive professional services for project oversight and Owner's representation for the PC-797 RRO Disinfection Progressive Design-Build Contract. The scope of work consists of completing basis of design, design and construction services to develop and implement a solution that will result in 100% disinfection of wet weather flow discharged from WRRF to Detroit River outfall and Rouge River Outfall in order to meet NPDES Permit requirements.

**Challenges:** N/A - Under Procurement

**Initial Project Cost Estimates (in \$1000s)**

| Phase  | Status          | Start Date | End Date   | Lifetime Actual Thru FY2016 (Unaudited) | Projected Expenditures FY2017 | Projected Expenditures FY2018 | Projected Expenditures FY2019 | Projected Expenditures FY2020 | Projected Expenditures FY2021 | Projected Expenditures FY2022 | Projected Expenditures FY2023 & Beyond | 2018-2022 CIP Total | Phase Total |
|--------|-----------------|------------|------------|---|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|--|---------------------|-------------|
| S/D/C  | Under Procure.  | 2/19/2016  | 12/31/2019 | \$729                                   | \$2690                        | \$0                           | \$0                           | \$0                           | \$0                           | \$0                           | \$0                                    | \$0                 | \$3419      |
| CM     | Under Procure.  | TBD        | TBD        | \$0                                     | \$1000                        | \$800                         | \$520                         | \$100                         | \$0                           | \$0                           | \$0                                    | \$1420              | \$2420      |
| C      | Not Yet Started | 2/19/2016  | 12/31/2019 | \$0                                     | \$2840                        | \$15000                       | \$15000                       | \$8920                        | \$0                           | \$0                           | \$0                                    | \$38920             | \$41760     |
| Totals |                 |            |            | \$729                                   | \$6530                        | \$15800                       | \$15520                       | \$9020                        | \$0                           | \$0                           | \$0                                    | \$40340             | \$47599     |



**Project 232002-Freud & Connor Creek Pump Station Improvements**

|   | Total Project<br>Budget per CIP<br>(Life of Projects) | Life-to-Date Through<br>June 30, 2017<br>(Unaudited) | FY 2018<br>Requested<br>Budget per CIP | FY 2018<br>(Unaudited), Pre-<br>Close Activity<br>(Three Months) | FY 2018 (Unaudited),<br>Pre-Close Activity as a<br>Percent of Total Sewer<br>Actual Expenses<br>(Three Months) |
|---|---|--|--|--|--|
| Wastewater System Projects  |   |  |  |  |  |
| <b>Project 232002: Freud and Connor Creek Pump<br/>Station Improvements</b> | \$ 22,500,000   | \$ 2,100,803   | \$ 5,900,000                           | \$ 1,230,332   | <b>7.6%</b>  |

**Project Manager:** Mini Panicker

**Total Budget:** \$8,830,431

**Timeline:** To be completed by August 2022

**FY 2018 Last Pay Estimate Processed:** September 30, 2017

**Key Contract/Vendor:** CS-120-Arcadis, CON-109-Lakeshore Global, PO 0003783-PCI LLC

**Project Description/Purpose:** The Freud & Connor Creek Pump Station Improvements will optimize the overall performance between both pumping stations and the Connor Creek Retention and Treatment Basin.

**Status:** Three conceptual alternatives were developed during the study phase. An alternative evaluation workshop is scheduled for January 2018. A second alternative evaluation workshop is being scheduled to select the right alternative for the design.

**Additional Project Manager Comments:** There are no additional comments to provide at this time.



**FY 2018-2022 CIP Page VI-103 for 232002-Freud & Connor Creek Pump Station Improvements**

**CIP Number:** CIP 1315

**Title:** FREUD & CONNER CREEK PUMP STATION IMPROVEMENTS

**Classification:** 232: Wastewater > SCC > Pumping Stations

**Managing Dept:** WW Eng

**RC Score:** 79.6

**Contract No.:** CON-109

**Significance:** The primary objective of this project is to study the overall performance of Connor Creek and Freud sewage pumping stations and develop design, and build an operational strategy to optimize the utilization of interconnected piping and operation between both pumping stations and the Connor Creek Retention and Treatment Basin.

**Location:** Conner Creek & Freud Pump Stations

**Driver:** 2 - Performance

**Explanation:** During peak wet weather there is a potential for the sewers to surcharge and flood the street.

**Preliminary Scope of Work:**

Provide basis of design, and final design for an operational strategy to optimize the utilization of interconnected piping and operation between Connor Creek and Freud pumping stations and the Connor Creek Retention and Treatment Basin. Provide construction of the emerging project and construction assistance during construction of the emerging project.

**Challenges:** Meeting the collection system transport capacity during the construction

**Initial Project Cost Estimates (in \$1000s)**

| Phase  | Status          | Start Date | End Date | Lifetime Actual Thru FY2016 (Unaudited) | Projected Expenditures FY2017 | Projected Expenditures FY2018 | Projected Expenditures FY2019 | Projected Expenditures FY2020 | Projected Expenditures FY2021 | Projected Expenditures FY2022 | Projected Expenditures FY2023 & Beyond | 2018-2022 CIP Total | Phase Total |
|--------|-----------------|------------|----------|---|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|--|---------------------|-------------|
| S      | Not Yet Started | NA         | NA       | \$0                                     | \$100                         | \$500                         | \$0                           | \$0                           | \$0                           | \$0                           | \$0                                    | \$500               | \$600       |
| D      | Not Yet Started | NA         | NA       | \$0                                     | \$340                         | \$3400                        | \$0                           | \$0                           | \$0                           | \$0                           | \$0                                    | \$3400              | \$3740      |
| C      | Not Yet Started | NA         | NA       | \$0                                     | \$5636                        | \$0                           | \$5100                        | \$2460                        | \$1000                        | \$0                           | \$0                                    | \$8560              | \$14196     |
| C      | Under Procure.  | NA         | NA       | \$0                                     | \$1964                        | \$2000                        | \$0                           | \$0                           | \$0                           | \$0                           | \$0                                    | \$2000              | \$3964      |
| Totals |                 |            |          | \$0                                     | \$8040                        | \$5900                        | \$5100                        | \$2460                        | \$1000                        | \$0                           | \$0                                    | \$14460             | \$22500     |



Freud Pump Station

### **Another Noteworthy Wastewater System Project**

**Project 260113-Fire Remediation****Project Manager:** Phil Kora**Total Budget:** \$10,500,000**Timeline:** To be completed by June 2018**FY 2018 Last Pay Estimate Processed:** September 30, 2017**Key Contract/Vendor:** Walsh Construction

**Project Description/Purpose:** The new CIP Project 260113: Fire Remediation project addresses the uninsured capital work at the Water Resource Recovery Facility (WRRF) resulting from the fire which occurred March 2016.

**Status:** The facility has been restored to service but installation of a new fire pump and related electrical work remains to be completed in FY 2018. A PO for the required transformers has been initiated. The transformers have a 16 week delivery lead time.

**Additional Project Manager Comments:** PMA is assisting GLWA in managing the Fire Remediation project (both insured and non-insured capital and O&M work). The additional cost of replacing the North side conveyor resulting from the fire is not included in the scope of this project.

A full presentation on this project was submitted to the Board of Directors on February 28, 2018.

<http://www.glwater.org/wp-content/uploads/2015/01/GLWA-Board-Agenda.02.28.2018.pdf>

## Construction Work-in-Progress Rollforward

The purpose of the construction work-in-progress (CWIP) rollforward is to analyze the current year activity for each project in relation to the overall capital improvement program as well as the project portfolio overall.

The CWIP Rollforward provides a project status for each item.

Future Year: Project that was included in the CIP with no expenditures (F)

Active: Project in which procurement process has been initiated and expenditures incurred (A)

Pending Close: Project that has no projected expenditures for the current fiscal year and has reached substantial completion (PC)

Closed: Project that has been closed and capitalized (C)

Projects in bold font on the CWIP Rollforward were discussed in further detail previously in this report.

As shown in the summary below, the Wastewater System CWIP Rollforward for FY 2018 thru 2022 identifies 85 projects with a total value of \$1.1 billion. Of that total, \$168.8 million (unaudited) is in CWIP as of September 30, 2017 as shown in the table beginning on the next page.

The order of the report on the subsequent pages is from largest spend in FY 2018 dollars first.

| Status             | Project Count | Total Project Cost      | Percent of Total |
|--------------------|---------------|-------------------------|------------------|
| Future             | 28            | 371,444,000             | 33%              |
| Active             | 40            | 694,649,000             | 62%              |
| Pending Close      | 5             | 8,098,000               | 1%               |
| Closed             | 12            | 41,029,000              | 4%               |
| <b>Grand Total</b> | <b>85</b>     | <b>\$ 1,115,220,000</b> | <b>100%</b>      |

Great Lakes Water Authority  
Wastewater Construction Work-on-Progress (CWIP) FY 2018 Rollforward  
(Unaudited), Pre-Close Activity for the Quarter Ended September 30, 2017

**Wastewater System**  
**Construction Work-in-Progress Quarterly Report**  
As of September 30, 2017

| CIP #  | Brief Description   | Status | Total Project Estimate from CIP | CWIP Balance July 1, 2017 (Unaudited) | FY 2018 Activity (Unaudited) Pre-Close |   |                               |                         |   |  |  | FY 2018 Activity (Unaudited), Pre-Close | (Unaudited), Pre-Close CWIP Balance, as of September 30, 2017 |
|--------|---|--------|---------------------------------|---------------------------------------|--|---|-------------------------------|-------------------------|---|--|--|---|---|
|        |   |        |                                 |                                       | Construction: (616900)                 | Contractual Engineering Services (617950) | Capitalized Interest (703115) | Other Expenses (617900) | Capital Allocation: Salary & Wages- Direct (601995) | Capital Allocation: Non-Personnel (601998) | Capital Allocation: Employee Benefits (601997) |   |   |
| 211001 | Project 211001: Rehabilitation of Primary Clarifiers/Rectangular Tanks, Drain Lines, Electrical/Mechanical Building and Pipe Gallery          | A      | 51,903,000                      | 10,243,275                            | 4,031,809                              | 69,744                                    | -                             | -                       | 21,411  | -  | 8,564  | 4,131,528                               | 14,374,803  |
| 212003 | Project 212003: Aeration System Improvements  | A      | 16,203,000                      | 3,804,993                             | 3,157,040                              | 55,798                                    |                               |                         | 17,193  |  | 6,877  | 3,236,908                               | 7,041,901   |
| 212006 | Project 212006: PC-797 Rouge River Outfall Disinfection and CS-1781 Oversight Consulting Services Contract                                    | A      | 47,599,000                      | 6,872,993                             | 2,885,437                              | 201,277                                   |                               |                         | 6,090   |  | 2,436  | 3,095,240                               | 9,968,233   |
| 260301 | Project 260301: Roof Replacement of Complex II  | A      | 1,871,000                       | -                                     | 1,341,238                              |   |                               |                         |   |  |  | 1,341,238                               | 1,341,238   |
| 232002 | Project 232002: Freud and Connor Creek Pump Station Improvements  | A      | 22,500,000                      | 2,100,803                             | 949,793                                | 125,000                                   |                               |                         |   | 155,539                                    |  | 1,230,332                               | 3,331,135   |
| 215001 | Project 215001: Rehabilitation of Combined Sewer Overflow (CSO) Retention Treatment Basins (RTB), Screening and Disinfection Facilities (SDF) | A      | 31,977,000                      | 763,690                               | 807,695                                | 63,024                                    |                               |                         | 5,432   |  | 2,173  | 878,324                                 | 1,642,014   |
| 260201 | Project 260201: Conveyance System Interceptor Rehab   | A      | 1,828,000                       | 90,500                                | 384,945                                |   |                               |                         |   |  |  | 384,945                                 | 475,445   |
| 260203 | Project 260203: SCP-CON-068: Inland: Sewer Inspection   | A      | 4,464,000                       | 3,306,028                             | 376,208                                |   |                               |                         |   |  |  | 376,208                                 | 3,682,236   |
| 260101 | Project 260101: Plant-Wide Replacement of Emergency Lighting  | PC     | 1,680,000                       | 289,743                               | 353,592                                |   |                               |                         | 13,147  |  | 5,259  | 371,998                                 | 661,741   |
| 211004 | Project 211004: Pump Station 1 Rack & Grit and MPI Sampling Station 1 Improvements  | A      | 21,494,000                      | 20,944,123                            | 237,215                                |   |                               |                         | 54,517  |  | 21,807   | 313,539                                 | 21,257,662  |
| 213003 | Project 213003: Sewage Sludge Incinerator Air Quality Improvements at WRRF  | A      | 36,043,000                      | 36,153,036                            | 186,069                                |   |                               |                         | 8,651   |  | 3,461  | 198,181                                 | 36,351,217  |
| 361001 | Project 361001: Consolidated Process Control System Upgrades  | A      | 331,000                         | 173,127                               | 23,750                                 |   |                               |                         |   |  |  | 23,750                                  | 196,877   |
| 213004 | Project 213004: Biosolids Dryer Facility at WRRF  | A      | 135,968,000                     | 2,023,774                             | 18,000                                 |   |                               |                         | 2,848   |  | 1,139  | 21,987                                  | 2,045,761   |
| 260302 | Project 260302: CON 127: Repair HVAC  | A      | 110,000                         | 56,282                                | 13,671                                 |   |                               |                         | 4,915   |  | 1,966  | 20,552                                  | 76,834  |
| 213001 | Project 213001: Replacement of Belt Filter Presses for Complex I and Upper Level Complex II   | C      | 1,901,000                       | -                                     | (63,150)                               |   |                               |                         | 966   |  | 386  | (61,798)                                | (61,798)  |
| 216001 | Project 216001: Underground Electrical Duct Bank Repair and EB-1, EB-2, and EB-10 Primary Power Service Improvements - WRRF                   | A      | 27,144,000                      | 31,636,300                            | (67,858)                               |   |                               |                         | 5,907   |  | 2,363  | (59,588)                                | 31,576,712  |
| 4824   | DWSD-Reha/Replacement Existing Sewer  | PC     | -                               | 56,280                                |  |   |                               |                         |   |  |  | -                                       | 56,280  |
| 211002 | Project 211002: Pump Station No. 2 Pumping Improvements   | A      | 3,533,000                       | 108,416                               |  |   |                               |                         | 5,152   |  | 2,061  | 7,213                                   | 115,629   |
| 211003 | Project 211003: Rehabilitation of Primary Clarifiers  | A      | 581,000                         | 1,701,631                             |  |   |                               |                         | 450   |  | 180  | 630                                     | 1,702,261   |
| 211005 | Project 211005: Pump Station No. 2 Improvements   | F      | 10,800,000                      | -                                     |  |   |                               |                         |   |  |  | -                                       | -   |
| 211006 | Project 211006: Pump Station No. 1 Improvements   | F      | 13,129,000                      | 88                                    |  |   |                               |                         |   |  |  | -                                       | 88  |
| 211007 | Project 211007: Replacement of Bar Racks and Grit Collection System at Pump Station No. 2   | F      | 9,667,000                       | -                                     |  |   |                               |                         |   |  |  | -                                       | -   |
| 211008 | Project 211008: Rehabilitation of Ferric Chloride Feed systems at the Pump Station -1 and Complex B Sludge Lines                              | F      | 9,633,000                       | -                                     |  |   |                               |                         |   |  |  | -                                       | -   |
| 211009 | Project 211009: Rehabilitation of the Circular Primary Clarifier Scum Removal System  | F      | 10,480,000                      | -                                     |  |   |                               |                         |   |  |  | -                                       | -   |

Great Lakes Water Authority

Wastewater Construction Work-on-Progress (CWIP) FY 2018 Rollforward  
(Unaudited), Pre-Close Activity For the Quarter Ended September 30, 2017

Wastewater System  
Construction Work-in-Progress Quarterly Report  
As of September 30, 2017

|        |   |        |                                 |                                       | FY 2018 Activity (Unaudited) Pre-Close |   |                               |                         |   |  |  |   |   |
|--------|---|--------|---------------------------------|---------------------------------------|--|---|-------------------------------|-------------------------|---|--|--|---|---|
| CIP #  | Brief Description   | Status | Total Project Estimate from CIP | CWIP Balance July 1, 2017 (Unaudited) | Construction: (616900)                 | Contractual Engineering Services (617950) | Capitalized Interest (703115) | Other Expenses (617900) | Capital Allocation: Salary & Wages- Direct (601995) | Capital Allocation: Non-Personnel (601998) | Capital Allocation: Employee Benefits (601997) | FY 2018 Activity (Unaudited), Pre-Close | (Unaudited), Pre-Close CWIP Balance, as of September 30, 2017 |
| 212001 | Project 212001: Returned Activated Sludge (RAS) Pumps, Influent Mixed Liquor System and Motor Control Centers (MCC) Improvements for Secondary Clarifiers | C      | 24,175,000                      | -                                     |  |   |                               |                         |   |  |  | -                                       | -   |
| 212002 | Project 212002: Study, Design, & Construction,Management Services for Modified Detroit River Outfall No. 2 - WRRF   | A      | 8,482,000                       | 10,818,870                            |  |   |                               |                         |   |  |  | -                                       | 10,818,870  |
| 212004 | Project 212004: Chlorination/Dechlorination Process Equipment Improvements  | A      | 5,000,000                       | 85,850                                |  |   |                               |                         |   |  |  | -                                       | 85,850  |
| 212005 | Project 212005: Rouge River Outfall No. 2 (RRO-2) Segement 1-WWTP Modifications   | C      | 12,187,000                      | -                                     |  |   |                               |                         |   |  |  | -                                       | -   |
| 212007 | Project 212007: Rehabilitation of the Secondary Clarifiers  | F      | 30,999,000                      | -                                     |  |   |                               |                         |   |  |  | -                                       | -   |
| 213002 | Project 213002: Rehabilitation of Central Offload Facility  | A      | 17,750,000                      | 202,142                               |  |   |                               |                         | 2,571   |  | 1,028  | 3,599                                   | 205,741   |
| 213005 | Project 213005: Complex I Incinerators Decommissioning and Reusability  | F      | 1,100,000                       | -                                     |  |   |                               |                         |   |  |  | -                                       | -   |
| 213006 | Project 213006: Improvements to Sludge Feed Pumps at Dewatering Facilities  | A      | 1,185,000                       | 4,856                                 |  |   |                               |                         |   |  |  | -                                       | 4,856   |
| 213007 | Project 213007: Construction of the Improved Sludge Conveyance and Lighting System at the WWTP  | F      | 18,922,000                      | -                                     |  |   |                               |                         |   |  |  | -                                       | -   |
| 213008 | Project 213008: Rehabilitation of the Wet and Dry Ash Handling Systems  | F      | 18,316,000                      | -                                     |  |   |                               |                         |   |  |  | -                                       | -   |
| 213009 | Project 213009: Phosphorous Recovery Facility at the WWRF   | F      | 15,000,000                      | -                                     |  |   |                               |                         |   |  |  | -                                       | -   |
| 214001 | Project 214001: Relocation of Industrial Waste Division and Analytical Laboratory Operations  | A      | 7,000,000                       | 181,500                               |  |   |                               |                         |   |  |  | -                                       | 181,500   |
| 216002 | Project 216002: Plant-wide Fire Alarm Systems Upgrade/ Integration and Fire Protection Improvements   | A      | 6,014,000                       | -                                     |  |   |                               |                         | 951   |  | 381  | 1,332                                   | 1,332   |
| 216003 | Project 216003: Repair Potable Water, Screened Final Effluent, natural Gas, and Compressed Air Pipelines at the WWTP                                      | F      | 5,000,000                       | -                                     |  |   |                               |                         |   |  |  | -                                       | -   |
| 216004 | Project 216004: Rehabilitation of Various Sampling Sites and PS# 2 Ferric Chloride System at WWTP   | A      | 5,000,000                       | 311,736                               |  |   |                               |                         |   |  |  | -                                       | 311,736   |
| 216005 | Project 216005: Rehabilitation of the Main Plant Maintenance Building, Replacement of various Plant Maintenance Areas and Work Environment Improvement.   | F      | 12,900,000                      | -                                     |  |   |                               |                         |   |  |  | -                                       | -   |
| 216006 | Project 216006: Rehabilitation of the Screened Final Effluent (SFE) Pump Station and Secondary Water System   | F      | 50,000,000                      | -                                     |  |   |                               |                         |   |  |  | -                                       | -   |
| 216007 | Project 216007: DTE Primary Electric 3rd Feed Supply Line to the WRRF   | A      | 7,000,000                       | 15,074                                |  |   |                               | 13,500                  |   |  |  | 13,500                                  | 28,574  |
| 222001 | Project 222001: Intercommunity Relief Sewer Modifications in Detroit Oakwood District   | F      | 11,000,000                      | -                                     |  |   |                               |                         |   |  |  | -                                       | -   |
| 222002 | Project 222002: Detroit River Interceptor Evaluation and Rehabilitation   | A      | 20,321,000                      | 5,380                                 |  |   |                               |                         |   |  |  | -                                       | 5,380   |
| 222003 | Project 222003:North Interceptor East Arm (NIEA) Evaluation and Rehabilitation  | F      | 26,000,000                      | -                                     |  |   |                               |                         |   |  |  | -                                       | -   |
| 222004 | Project 222004:Collection System Valve Remote Operation Structures Improvements   | F      | 2,763,000                       | -                                     |  |   |                               |                         |   |  |  | -                                       | -   |

# Wastewater System

## Construction Work-in-Progress Quarterly Report

As of September 30, 2017

|        |  |   |                                 |                                       | FY 2018 Activity (Unaudited) Pre-Close |   |                               |                         |   |   |  |  |  |
|--------|--|---|---------------------------------|---------------------------------------|--|---|-------------------------------|-------------------------|---|---|--|--|--|
|        |  |   | Total Project Estimate from CIP | CWIP Balance July 1, 2017 (Unaudited) | Construction: (616900)                 | Contractual Engineering Services (617950) | Capitalized Interest (703115) | Other Expenses (617900) | Capital Allocation: Salary & Wages- Direct (601995) | Capital Allocation: Non- Personnel (601998) | Capital Allocation: Employee Benefits (601997) | FY 2018 Activity (Unaudited), Pre- Close | (Unaudited), Pre- Close CWIP Balance, as of September 30, 2017 |
| 222005 | Project 222005: Collection System Access Hatch Improvements  | F | 7,197,000                       | -                                     |  |   |                               |                         |   |   |  | -  | -  |
| 222006 | Project 222006: GLWA CSO Outfalls Rehabilitation   | F | 36,000,000                      | -                                     |  |   |                               |                         |   |   |  | -  | -  |
| 222007 | Project 222007: North Interceptor East Arm (NIEA) Evaluation and Rehabilitation from WRRF to Gratiot Ave. and Sylvester St.                                      | F | 21,000,000                      | -                                     |  |   |                               |                         |   |   |  | -  | -  |
| 232001 | Project 232001: Fairview Pumping Station - Replace Four Sanitary Pumps   | A | 32,400,000                      | 778,162                               |  | 283,408                                   |                               |                         | 3,837   |   | 1,535  | 288,780                                  | 1,066,942  |
| 232003 | Project 232003: Northeast Pump Station Improvements  | F | 26,328,000                      | -                                     |  |   |                               |                         |   |   |  | -  | -  |
| 233001 | Project 233001: Collection System Backwater Gates and Regulator Gates Rehabilitation   | F | 9,301,000                       | -                                     |  |   |                               |                         |   |   |  | -  | -  |
| 233002 | Project 233002: Collection System In System Storage Devices(ISDs) Improvements   | F | 3,550,000                       | -                                     |  |   |                               |                         |   |   |  | -  | -  |
| 251002 | Project 251002: Wastewater System Wide Instrumentation & Controls Software and Hardware Upgrade  | F | 5,862,000                       | -                                     |  |   |                               |                         |   |   |  | -  | -  |
| 260100 | Project 260100: Water Resource Recovery Facility (WRRF), Lift Station & Wastewater Collection System Allowance   | A | 52,843,000                      | -                                     |  |   |                               |                         |   |   |  | -  | -  |
| 260102 | Project 260102: Replace Stairs - WWTP  | C | 500,000                         | -                                     |  |   |                               |                         |   |   |  | -  | -  |
| 260103 | Project 260103: Replace 4 DS-706 Centrifuges WWTP  | C | 600,000                         | -                                     |  |   |                               |                         |   |   |  | -  | -  |
| 260104 | Project 260104: Pur Installation of EB-25 Unit WWTP  | C | 1,195,000                       | -                                     |  |   |                               |                         |   |   |  | -  | -  |
| 260105 | Project 260105: Replace Various Air Distribution Equip   | C | 286,000                         | -                                     |  |   |                               |                         | 64  |   | 26   | 90                                       | 90   |
| 260107 | Project 260107: Pump Station 2 Replacement   | F | 331,000                         | -                                     |  |   |                               |                         |   |   |  | -  | -  |
| 260108 | Project 260108: Sanitary Meter Replacement: Neff Road  | C | 448,000                         | -                                     |  |   |                               |                         |   |   |  | -  | -  |
| 260110 | Project 260110: CS060: Black& Veatch:  | A | 2,266,000                       | 1,458,339                             |  | 112,268                                   |                               |                         | 2,011   |   | 805  | 115,084                                  | 1,573,423  |
| 260111 | Project 260111: SCP-PC-015: W-3 Construct: Overhead Door   | C | 593,000                         | -                                     |  |   |                               |                         |   |   |  | -  | -  |
| 260112 | Project 260112: DWS-065: Tooles: Connor Creek  | C | 345,000                         | -                                     |  |   |                               |                         | 129   |   | 51   | 180                                      | 180  |
| 260113 | Project 260113: Fire Remediation   | A | 10,500,000                      | 17,005,859                            |  |   |                               |                         |   |   |  | -  | 17,005,859   |
| 260200 | Project 260200: Sewer and Interceptor Evaluation and Rehabilitation Program NNB  | A | 72,320,000                      | -                                     |  |   |                               |                         |   |   |  | -  | -  |
| 260300 | Project 260300: Schedule Replacement Program of Critical Assets NNB  | A | 23,519,000                      | -                                     |  |   |                               |                         |   |   |  | -  | -  |
| 260400 | Project 260400: Sewage Meter Design, Installation, Replacement and Rehabilitation Program  | F | 3,000,000                       | -                                     |  |   |                               |                         |   |   |  | -  | -  |
| 331002 | Project 331002: Roofing Systems Replacement at GLWA Wastewater Treatment Plant, CSO Retention Treatment Basins (RTB) and Screening Disinfection Facilities (SDF) | F | 9,050,000                       | -                                     |  |   |                               |                         |   |   |  | -  | -  |



Great Lakes Water Authority

Wastewater Construction Work-on-Progress (CWIP) FY 2018 Rollforward  
(Unaudited), Pre-Close Activity For the Quarter Ended September 30, 2017

# Wastewater System

## Construction Work-in-Progress Quarterly Report

As of September 30, 2017

|  |  |        |                                 |                                       | FY 2018 Activity (Unaudited) Pre-Close |   |                               |                         |   |   |  |   |   |
|--|--|--------|---------------------------------|---------------------------------------|--|---|-------------------------------|-------------------------|---|---|--|---|---|
| CIP #  | Brief Description  | Status | Total Project Estimate from CIP | CWIP Balance July 1, 2017 (Unaudited) | Construction: (616900)                 | Contractual Engineering Services (617950) | Capitalized Interest (703115) | Other Expenses (617900) | Capital Allocation: Salary & Wages- Direct (601995) | Capital Allocation: Non- Personnel (601998) | Capital Allocation: Employee Benefits (601997) | FY 2018 Activity (Unaudited), Pre-Close | (Unaudited), Pre-Close CWIP Balance, as of September 30, 2017 |
| 361002   | Project 361002: Data Center Reliability/Availability Improvements  | PC     | 3,163,000                       | 17,253                                |  |   |                               |                         |   |   |  | -                                       | 17,253  |
| 361003   | Project 361003: SCADA Radio Network Upgrade  | PC     | 2,955,000                       | 852,872                               |  |   |                               |                         |   |   |  | -                                       | 852,872   |
| 380400   | Project 380400: As-needed CIP Implementation Assistance and Related Services NNB   | A      | 3,135,000                       | -                                     |  |   |                               |                         |   |   |  | -                                       | -   |
| 380401   | Project 380401: CS-1433: PMA: As Needed CIP Services   | A      | 3,135,000                       | 105,279                               |  | 33,453                                    |                               |                         |   |   |  | 33,453                                  | 138,732   |
| 380500   | Project 380500: Department-wide General Engineering Services on an As-needed Basis   | A      | 4,960,000                       | -                                     |  |   |                               |                         |   |   |  | -                                       | -   |
| 380501   | Project 380501: CS-1499:MetcoServices:General Engineer   | PC     | 300,000                         | 148,366                               |  | 11,080                                    |                               |                         |   |   |  | 11,080                                  | 159,446   |
| 380600   | Project 380600: General Engineering Services   | A      | 7,016,000                       | -                                     |  |   |                               |                         |   |   |  | -                                       | -   |
| 380601   | Project 380601: CS-1432A:Alfred Benesh:General Engineer  | A      | 250,000                         | 157,929                               |  | 7,774                                     |                               |                         | 2,379   |   | 951  | 11,104                                  | 169,033   |
| 380700   | Project 380700: As-needed Engineering Services for Concrete Testing, Geotechnical Soil Borings, other Testing Services, and Related Services | C      | -                               | -                                     |  |   |                               |                         |   |   |  | -                                       | -   |
| 380701   | Project 380701: Engineering Svc Concrete Testing,Soil Borings  | A      | -                               | 115,388                               |  |   |                               |                         |   |   |  | -                                       | 115,388   |
| 380800   | Project 380800: Geotechnical and Related Services on an As- Needed Basis   | F      | 1,116,000                       | -                                     |  |   |                               |                         |   |   |  | -                                       | -   |
| 380800   | Project 380800: Geotechnical and Related Services on an As- Needed Basis   | C      | (1,201,000)                     | -                                     |  |   |                               |                         |   |   |  | -                                       | -   |
| 380801   | Project 380801: CS-1490: Nth Consultants: As needed GIS  | A      | 85,000                          | 82,476                                |  |   |                               |                         |   |   |  | -                                       | 82,476  |
| 380900   | Project 380900: General Engineering Services   | A      | 649,000                         | -                                     |  |   |                               |                         |   |   |  | -                                       | -   |
| 380901   | Project 380901: CS-1481:Sigma Assoc: General Engineering   | A      | 270,000                         | 63,426                                |  | 109,036                                   |                               |                         |   |   |  | 109,036                                 | 172,462   |
| 381000   | Project 381000: Energy Management: Electric Metering Improvement Program   | F      | 3,000,000                       | -                                     |  |   |                               |                         |   |   |  | -                                       | -   |
|  |  |        |                                 |                                       |  |   |                               |                         |   |   |  |   |   |
| Total # of Projects and Dollars                    |  | 85     | 1,115,220,000                   | 152,735,840                           | 14,635,455                             | 1,085,362                                 | -                             | -                       | 158,621   | 155,539                                     | 63,449   | 16,098,425                              | 168,834,265   |
| FY 2018-2022 CIP Total (Page IV-3)                 |  |        | 1,115,218,000                   | 152,735,840                           |  |   |                               |                         |   |   |  |   |   |
| Difference due to Rounding                         |  |        | (2,000)                         |                                       |  |   |                               |                         |   |   |  |   |   |
| Items to be reclassified to Capital Outlay FY 2018 |  |        |                                 | 605,618                               |  |   |                               |                         |   |   |  |   |   |
| Toal CWIP Reported on Financial Statements         |  |        |                                 | 153,341,458                           |  |   |                               |                         |   |   |  |   |   |

## **CIP Allowance and Program Summary**

Within the FY 2018 - 2022 CIP, GLWA has developed budgets for allowance and programs that provide GLWA flexibility in capital development and improvements.

These Allowance are established to provide funding related to unanticipated nature of pipeline and equipment failures that require immediate repair and rehabilitation to continuously meet level of service requirement. Allowances can also be allocated to projects with anticipated or actual spend in excess of CIP budget.

Programs are established to provide funding related to specific capital improvements that are systemic, reoccurring, and vary from year to year.

Below are the allowances and programs within the Wastewater System.

### **Allowance**

260100: WRRF, Lift Station and WasteWater System Structure Allowance

### **Programs**

260200: Sewer and Interceptor Evaluation and Rehabilitation

260300: Scheduled Replacement of Program of Critical Assets

260400: Sewage Meter Design, Installation, Replacement and Rehabilitation Program

## **Budget Amendment Reporting**

**Scope:** The budget amendments seeks to properly allocate funds from the allowance and programs within the Capital Improvement Plan (CIP) for the budgeted years by the reallocation of funds from the budgeted allowance or programs level to the actual project level.

**Process:** Steps are listed below.

- 1) To properly identify projects that utilize funds from the allowance or programs
- 2) Reallocate the funds from the budgeted allowance or programs level through a journal entry
- 3) Attach supporting documents to support the reallocation (CIP funding request, contract transmittal, or change orders)
- 4) Create, Review, and approve budget amendment journal entry

## Wastewater System Construction Work-in-Progress Quarterly Report

As of September 30, 2017

Great Lakes Water Authority

Board Approved CIP Allowance/Program Summary

Allowance: 260100 Water Resource Recovery Facility, Lift Station, and Wastewater Collection System Structures Allowance

| CIP#          | Contract Number | Description   | Current Budget Amendment | FY2018            | FY 2019           | FY 2020           | FY 2021           | FY 2022           |
|---------------|-----------------|---|--------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| <b>260100</b> |                 | <b>WRRF, Lift Station and Wastewater Collection System Structures</b> |                          | <b>13,421,000</b> | <b>12,000,000</b> | <b>15,000,000</b> | <b>15,000,000</b> | <b>12,000,000</b> |
| 260101        | SCP-PC-014      | Replacement Emergency Lighting and Signage                            |                          | 579,000           |                   |                   |                   |                   |
| 260110        | CS-060          | Study and Design for Modification of Sludge Feeds Systems             | 6920                     | (174,000)         |                   |                   |                   |                   |
| 260113        |                 | Fire Remediation  | 6992                     | (2,000,000)       |                   |                   |                   |                   |
| <b>Total</b>  | <b>2</b>        | <b>Available Balance</b>  |                          | <b>11,826,000</b> | <b>12,000,000</b> | <b>15,000,000</b> | <b>15,000,000</b> | <b>12,000,000</b> |

Great Lakes Water Authority

Board Approved CIP Allowance/Program Summary

Program: 260200 Sewer and Interceptor Evaluation and Rehabilitation

| CIP#          | Contract Number | Description  | Current Budget Amendment | FY2018           | FY 2019          | FY 2020           | FY 2021           | FY 2022           |
|---------------|-----------------|--|--------------------------|------------------|------------------|-------------------|-------------------|-------------------|
| <b>260200</b> |                 | <b>Sewer and Interceptor Evaluation and Rehabilitation Program</b> |                          | <b>8,000,000</b> | <b>8,000,000</b> | <b>20,000,000</b> | <b>20,000,000</b> | <b>20,000,000</b> |
| 260201        | CS-168          | Conveyance System Interceptor Rehab                                | 7013                     | (1,000,000)      | (1,000,000)      | (1,000,000)       |                   |                   |
| 260201        | CON-149         | CON-149 Inland: DRI, Evaluation, Design                            | 7013                     | (4,795,540)      | (6,600,000)      | (3,404,460)       |                   |                   |
| 260203        | CS-068          | CON-068 Inland: Sewer Inspection                                   | 7011                     | (2,140,460)      |                  |                   |                   |                   |
| <b>Total</b>  | <b>3</b>        | <b>Available Balance</b>   |                          | <b>64,000</b>    | <b>400,000</b>   | <b>15,595,540</b> | <b>20,000,000</b> | <b>20,000,000</b> |

## Wastewater System Construction Work-in-Progress Quarterly Report

As of September 30, 2017

Great Lakes Water Authority  
Board Approved CIP Allowance /Program Summary  
Allowance: 260300 Scheduled Replacement of Program of Critical Assets

| CIP#         | Contract Number  | Description                                     | Current Budget Amendment | FY2018         | FY 2019          | FY 2020          | FY 2021          | FY 2022          |
|--------------|------------------|---|--------------------------|----------------|------------------|------------------|------------------|------------------|
| 260300       |                  | Schedule Replacement Program of Critical Assets |                          | 3,721,000      | 5,000,000        | 5,000,000        | 5,000,000        | 5,000,000        |
| 260301       | CON-143          | Roof Replacement of Complex II                  | 6990                     | (1,567,400)    |                  |                  |                  |                  |
| 260113       | Fire Remediation | Fire Remediation                                | 6992                     | (2,000,000)    |                  |                  |                  |                  |
| <b>Total</b> | <b>2</b>         | <b>Available Balance</b>                        |                          | <b>153,600</b> | <b>5,000,000</b> | <b>5,000,000</b> | <b>5,000,000</b> | <b>5,000,000</b> |

Great Lakes Water Authority  
Board Approved CIP Allowance/Program Summary  
Program: 260400 Sewage Meter Design, Installation, Replacement and Rehabilitation Program

| CIP#         | Contract Number | Description   | Current Budget Amendment | FY2018         | FY 2019        | FY 2020        | FY 2021        | FY 2022        |
|--------------|-----------------|---|--------------------------|----------------|----------------|----------------|----------------|----------------|
| 260400       |                 | Sewage Meter Design, Installation, Replacement and Rehabilitation Program |                          | 500,000        | 500,000        | 500,000        | 500,000        | 500,000        |
| <b>Total</b> | <b>0</b>        | <b>Available Balance</b>  |                          | <b>500,000</b> | <b>500,000</b> | <b>500,000</b> | <b>500,000</b> | <b>500,000</b> |

Great Lakes Water Authority  
 Budget Amendment Processed for FY 2018 through September 30, 2017

| Budget Amendments/Descriptions/Reasons/GL Strings  |                               | Amount        |
|--|-------------------------------|---------------|
| <b>6920</b>  |                               |               |
| <b>CIP 260100: Water Resource Recovery Facility, Lift Station, and Wastewater Collection System Structures Allowance</b> |                               |               |
| To fund Contracted Construction Services not budgeted for in FY 2018-2022 CIP  |                               |               |
| <b>Cost in Excess of CIP Budget</b>  |                               |               |
|  | 5421-892211.000-616900-260100 | (\$174,000)   |
| <b>CIP 260110: CS-060: Upgraded Sludge Conveyance System Design</b>  |                               |               |
| To fund Contracted Construction Services not budgeted for in FY 2018-2022 CIP  |                               |               |
| <b>Cost in Excess of CIP Budget</b>  |                               |               |
|  | 5421-892211.000-616900-260110 | \$174,000     |
| <b>6990</b>  |                               |               |
| <b>CIP 260300: Scheduled Replacement of Program of Critical Assets</b>   |                               |               |
| To Fund Contracted Construction Services related to budgeted program assigned  |                               |               |
| <b>Fire Remediation-Roof Replacement</b>   |                               |               |
|  | 5421-892211.000-616900-260300 | (\$1,567,400) |
| <b>CIP 260301: CON-143: Roof Replacement of Complex II</b>   |                               |               |
| To Fund Contracted Construction Services related to budgeted program assigned  |                               |               |
| <b>Fire Remediation-Roof Replacement</b>   |                               |               |
|  | 5421-892211.000-616900-260301 | \$1,567,400   |
| <b>6992</b>  |                               |               |
| <b>CIP 260100: Water Resource Recovery Facility, Lift Station, and Wastewater Collection System Structures Allowance</b> |                               |               |
| To Fund Contracted Construction Services related to budgeted program assigned  |                               |               |
| <b>Fire Remediation</b>  |                               |               |
|  | 5421-892211.000-616900-260100 | \$2,000,000   |
| <b>CIP 260300: Scheduled Replacement of Program of Critical Assets</b>   |                               |               |
| To Fund Contracted Construction Services related to budgeted program assigned  |                               |               |
| <b>Fire Remediation</b>  |                               |               |
|  | 5421-892211.000-616900-260300 | (\$2,000,000) |



## Wastewater System Construction Work-in-Progress Quarterly Report

As of September 30, 2017

### 7011

**CIP 260203: CON-068: Inland: Sewer Inspection**

To Fund Contracted Construction Services related to budgeted program assigned  
**Allocation of Program**

5421-882301.000-616900-260203      \$2,140,460

**CIP 260200: Sewer and Interceptor Evaluation and Rehabilitation**

To Fund Contracted Construction Services related to budgeted program assigned  
**Allocation of Program**

5421-892211.000-616900-260200      (\$500,460)

5421-892211.000-617950-260200      (\$1,640,000)

### 7013

**CIP 260201: CON-149: Inland: DRI, Evaluation, Design**

To Fund Contracted Construction Services related to budgeted program assigned  
**Allocation of Program**

5421-882301.000-616900-260201      \$4,795,540

**CIP 260201: Conveyance System Interceptor Rehab**

To Fund Contracted Construction Services related to budgeted program assigned  
**Allocation of Program**

5421-882301.000-617950-260201      \$1,000,000

**CIP 260200: Sewer and Interceptor Evaluation and Rehabilitation**

To Fund Contracted Construction Services related to budgeted program assigned  
**Allocation of Program**

5421-892211.000-616900-260200      (\$4,795,540)

5421-892211.000-617950-260200      (\$1,000,000)

**Grand Total**

**0**

## Glossary of Acronyms

| ACRONYM | DEFINITION                                   | ACRONYM | DEFINITION                            |
|---------|--|---------|---------------------------------------|
| CCD     | Construction Change Directive                | RRO     | River Rouge Outfall                   |
| CSO     | Combined Sewer Overflow                      | RTB     | Retention Treatment Basins            |
| DCB     | Detailed Cost Breakdown                      | SDF     | Screening and Disinfection Facilities |
| HPO     | High Purity Oxygen                           | SFE     | Screened Final Effluent               |
| ISDs    | In System Storage Devices                    | SPW     | Springwells Water Treatment Plant     |
| MCC     | Motor Control Centers                        | WRRF    | Water Resource Recovery Facility      |
| MDEQ    | Michigan Department of Environmental Quality | WTP     | Water Treatment Plant                 |
| NIEA    | North Interceptor East Arm                   | WWRF    | Waste Water Resource Facility         |
| NPDES   | National Pollution Discharge Elimination     | WWTP    | Waste Water Treatment Plant           |
| RAS     | Returned Activated Sludge                    |         |                                       |



## Financial Services Audit Committee Communication

**Date:** March 16, 2018

**To:** Great Lakes Water Authority Audit Committee

**From:** Nicolette Bateson, CPA, Chief Financial Officer/Treasurer

**Re:** Key Performance Indicators

**Background:** As GLWA enters its third year of operations, sufficient initial baseline information, business processes, and financial systems are in place to support expanded Key Performance Indicator (KPI) reporting. KPIs reflect what is most important to stakeholders.

**Analysis:** The table below identifies current KPIs reported to the GLWA Board as well as additional KPIs requested by GLWA Board Directors.

### **Current KPIs**

- ✓ Reliability of Revenue Projections
- ✓ Monthly Operations & Maintenance Cash Expenses to Month-end Cash Balance

### **KPIs in Development**

- ✓ Procurement Cycles
- ✓ Improvement & Extension Activity
- ✓ Active vs. Passive Investing Ratio
- ✓ Memorandum of Understanding Progress
- ✓ Capital Improvement Plan Spending
- ✓ Revenues and Expenses
- ✓ Debt Service Coverage

**Proposed Action:** Receive and file report.